					DEPARTMENT	OF NA	OF UTAH TURAL RESO GAS AND M				AMEN	FO DED REPOR	RM 3	
		AP	PLICATION F	OR P	ERMIT TO DRILL					1. WELL NAME and N	JMBER NBU 922	-34L1CS		
2. TYPE O	F WORK	DRILL NEW WELL	REENTE	R P&A	WELL DEEPEN	WELL [)			3. FIELD OR WILDCA	r Natural	.BUTTES		
4. TYPE O	F WELL				d Methane Well: NO					5. UNIT or COMMUNI	TIZATION NATURAL		ENT NAM	1E
6. NAME C	F OPERATOR				AS ONSHORE, L.P.					7. OPERATOR PHONE				
8. ADDRE	SS OF OPERATO	OR								9. OPERATOR E-MAIL	_			
	AL LEASE NUM	BER	P.O. Box 1737		nver, CO, 80217 11. MINERAL OWNERS	SHIP				12. SURFACE OWNER		anadarko	com	
(FEDERAL	., INDIAN, OR S	TATE) JTU-0149077			FEDERAL IND	DIAN 🛑) STATE () FEE		FEDERAL INI	DIAN 🛑	STATE	O F	EE 🔵
13. NAME	OF SURFACE	OWNER (if box 12 :	= 'fee')							14. SURFACE OWNER	R PHONE	(if box 12	= 'fee')	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNER	R E-MAIL	(if box 12	= 'fee')	
	N ALLOTTEE OI	R TRIBE NAME			18. INTEND TO COMM		PRODUCTION	FROM		19. SLANT				
(If box 12	= 'INDIAN')				ATT-1		ıling Applicati	on) NO [)	VERTICAL DIF	RECTION	AL 📵 F	IORIZONT	AL 🔵
20. LOC	TION OF WELL			FOO	DTAGES	QT	r-qtr	SECT	ION	TOWNSHIP	R	ANGE	МЕ	RIDIAN
LOCATIO	N AT SURFACE		20	71 FSL	. 1012 FWL	N	wsw	34		9.0 S	2:	2.0 E		S
Top of U	ppermost Prod	ucing Zone	21	07 FSL	. 1021 FWL	N	NWSW	34		9.0 S	2:	2.0 E		S
At Total	Depth		21	07 FSL	. 1021 FWL	١	wsw	34		9.0 S	2:	2.0 E		S
21. COUN	TY	UINTAH		2	22. DISTANCE TO NEA		EASE LINE (F 85	eet)		23. NUMBER OF ACRI		LLING UN	IT	
					25. DISTANCE TO NEA (Applied For Drilling o	or Comp		POOL		26. PROPOSED DEPTI		TVD: 896	9	
27. ELEV	ATION - GROUN	D LEVEL		2	28. BOND NUMBER		-			29. SOURCE OF DRIL			DDI 10 4 D	
		4989				WYB0	000291			WATER RIGHTS APPR		MBER IF A 8496	PPLICAB	LE
Otalia a	Hala Cina	0	Laureth	14/-:-	Hole, Casing					Comont		Castra	Viald	Mainba
String Surf	Hole Size	Casing Size 8.625	0 - 2360	Weig 28.			Max Mu			Cement Type V		Sacks 180	Yield 1.15	Weight 15.8
		0.020	0 2000				0.12			Class G		270	1.15	15.8
Prod	7.875	4.5	0 - 8970	11.	.6 I-80 LT8	&C	12.	0	Prer	nium Lite High Strer	ngth	310	3.38	12.0
										50/50 Poz		1210	1.31	14.3
					A	TTACH	IMENTS							
	VER	IFY THE FOLLO	WING ARE A	TTACH	HED IN ACCORDAN	ICE WIT	TH THE UTA	AH OIL AN	D GAS	CONSERVATION G	ENERA	L RULES		
w w	ELL PLAT OR M	AP PREPARED BY I	LICENSED SUR	/EYOR	OR ENGINEER		№ сом	PLETE DRIL	LING P	LAN				
AF	FIDAVIT OF STA	TUS OF SURFACE	OWNER AGREE	MENT	(IF FEE SURFACE)		FORM	1 5. IF OPER	RATOR I	S OTHER THAN THE LE	EASE OW	NER		
I ✓ DIF	RECTIONAL SUI	RVEY PLAN (IF DIR	ECTIONALLY C	R HOR	RIZONTALLY DRILLED)	торо	GRAPHICA	L MAP					
NAME Gi	na Becker			Т	TITLE Regulatory Analy	st II			PHON	E 720 929-6086				
SIGNATU	RE			D	DATE 01/03/2013				EMAIL	. gina.becker@anadark	o.com			
	BER ASSIGNED)4753497(0000		A	APPROVAL				Br	oo gill				
									Pern	nit Manager				

NBU 922-34L Pad Drilling Program
1 of 4

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 922-34L1CS

Surface: 2071 FSL / 1012 FWL NWSW BHL: 2107 FSL / 1021 FWL NWSW

Section 34 T9S R22E

Uintah County, Utah Mineral Lease: UTU-0149077

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta Green River Birds Nest Mahogany Wasatch Mesaverde Sego TVD	0 - Surface 1,162' 1,500' 1,914' 4,372' 6,747' 8,969' 8,969'	Water Water Gas Gas Gas
TD	8,970'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

6. <u>Evaluation Program:</u>

Please refer to the attached Drilling Program

NBU 922-34L Pad Drilling Program 2 of 4

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8969' TVD, approximately equals 5,471 psi 0.61 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,522 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

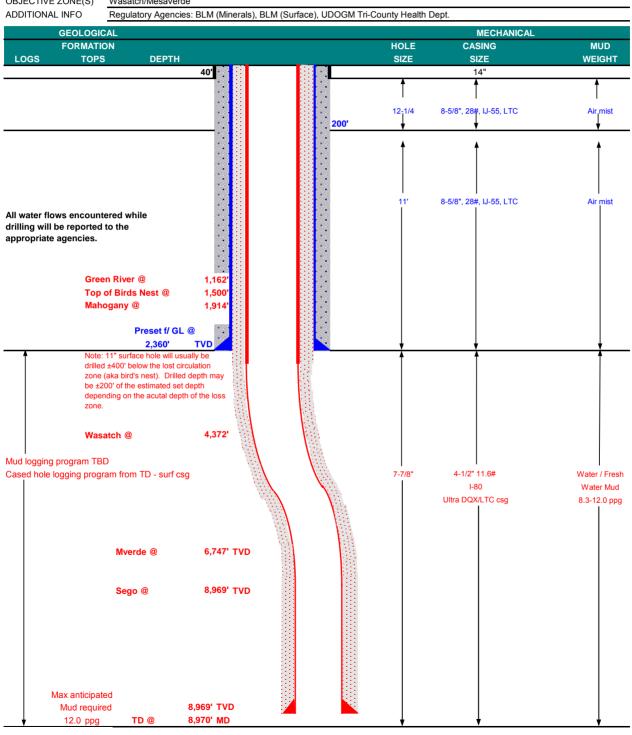
10. <u>Other Information:</u>

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERI	R-McGEE O	IL & GAS ONS	HORE LP		DATE	Novemb	per 27, 2012	
WELL NAME NBU	J 922-34L	1CS			TD	8,969'	TVD	8,970' MD
FIELD Natural Buttes	3	COUNTY	Uintah ST	ATE Utah		FINIS	HED ELEVATION	4,989'
SURFACE LOCATION	NWSW	2071 FSL	1012 FWL	Sec 34	T 9S	R 22E		
	Latitude:	39.990951	Longitude:	-109.431	965		NAD 83	
BTM HOLE LOCATION	NWSW	2107 FSL	1021 FWL	Sec 34	T 9S	R 22E		
	Latitude:	39.991049	Longitude:	-109.431	932		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/M	lesaverde						
ADDITIONAL INFO	Regulatory	Agencies: BLM	l (Minerals), BLM	1 (Surface),	UDOGM	Tri-County Hea	alth Dept.	
0501.0010								0114411041





KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAI	<u>VI</u>							DESIGN	FACTORS	
									LTC	DQX
	SIZE	INTE	RVAL	WT.	GR.	CPLG.	BURST	COLLA	APSE	TENSION
CONDUCTOR	14"	0-	-40'							
							3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,360	28.00	IJ-55	LTC	2.29	1.70	6.01	N/A
							7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	1.13		3.14
							7,780	6,350	223,000	267,035
	4-1/2"	5,000	to 8,970'	11.60	I-80	LTC	1.11	1.13	5.93	

Surface Casing:

(Burst Assumptions: TD =

12.0

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

(Burst Assumptions: Pressure test with 8.4ppg @

7000 psi)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIG	HT	YIELD
500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
	+ 0.25 pps flocele					
1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
	+ 2% CaCl + 0.25 pps flocele					
	NOTE: If well will circulate water to	surface, o _l	ption 2 will	be utilized		
1,860'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00		3.82
	+ 0.25 pps Flocele + 3% salt BWOW					
500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
	+ 0.25 pps flocele					
as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
3,870'	Premium Lite II +0.25 pps celloflake + .4% FL-52	310	35%	12.00		3.38
	+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
	1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
5,100'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,210	35%	14.30		1.31
	+ 1.2% Sodium Metasilicate + .5 % EC-1					
	+.002 gps FP-6L + 2% Bentonite II					
	1,200' 1,860' 500' as required 3,870'	500' Premium cmt + 2% CaCl	180	500' Premium cmt + 2% CaCl 180 60%	500' Premium cmt + 2% CaCl 180 60% 15.80	15.80

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

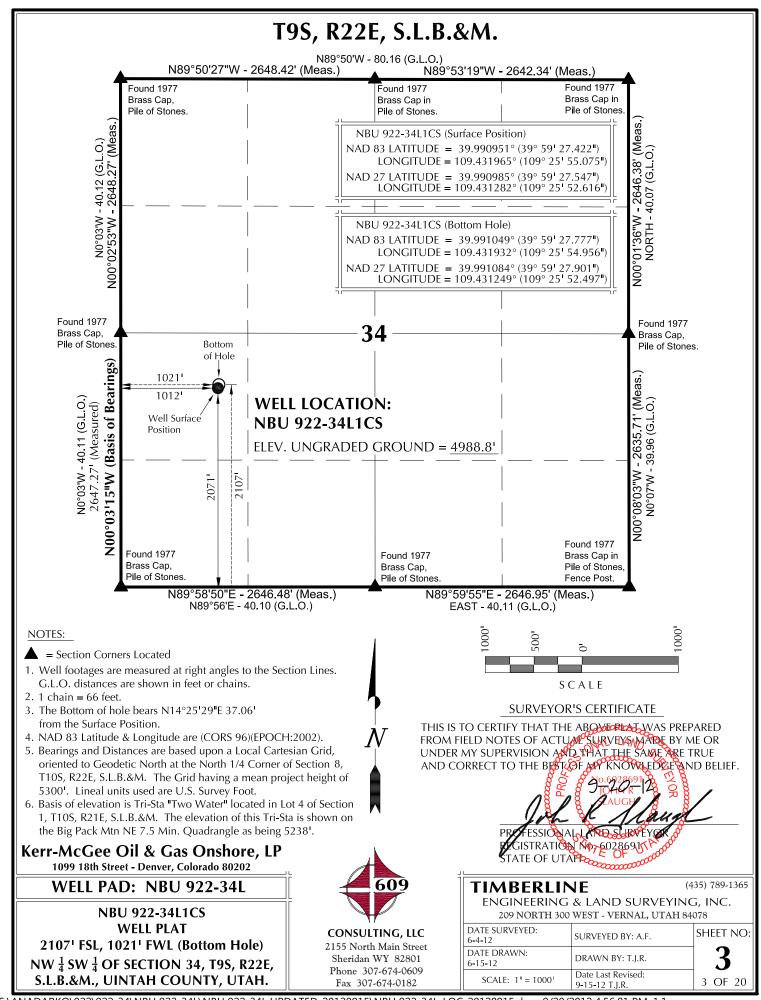
Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliot

DRILLING SUPERINTENDENT:

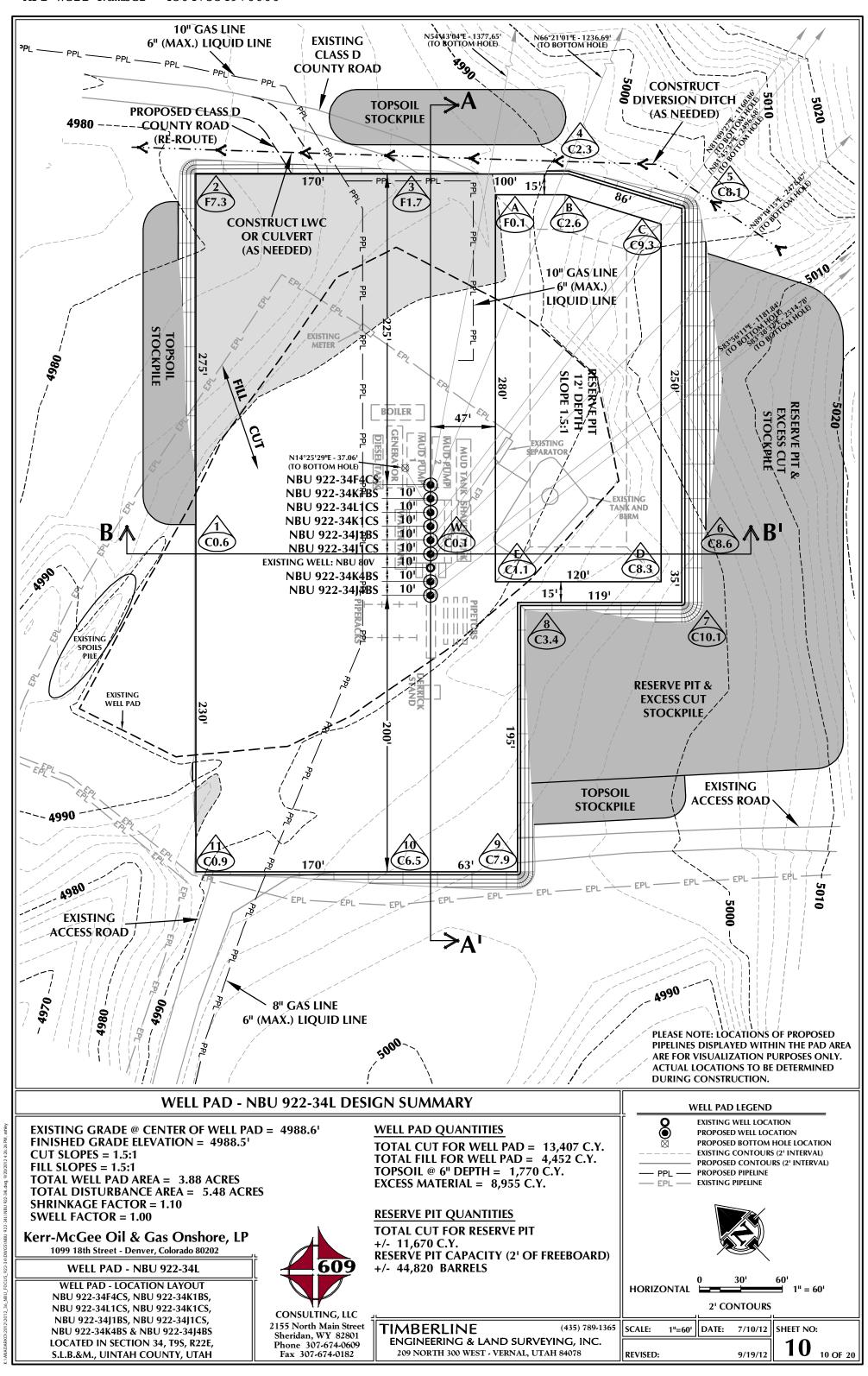
Kenny Gathings / Lovel Young

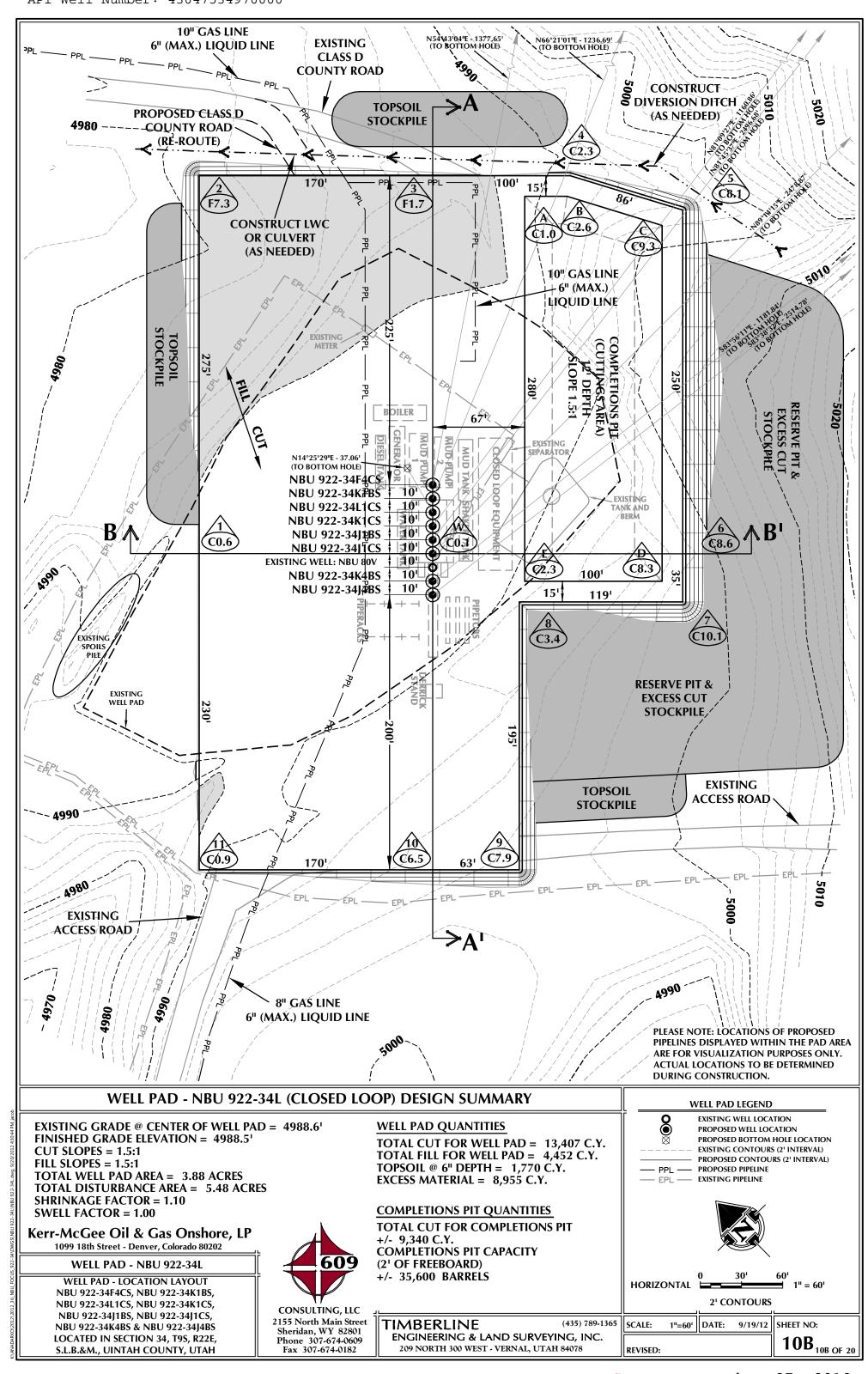
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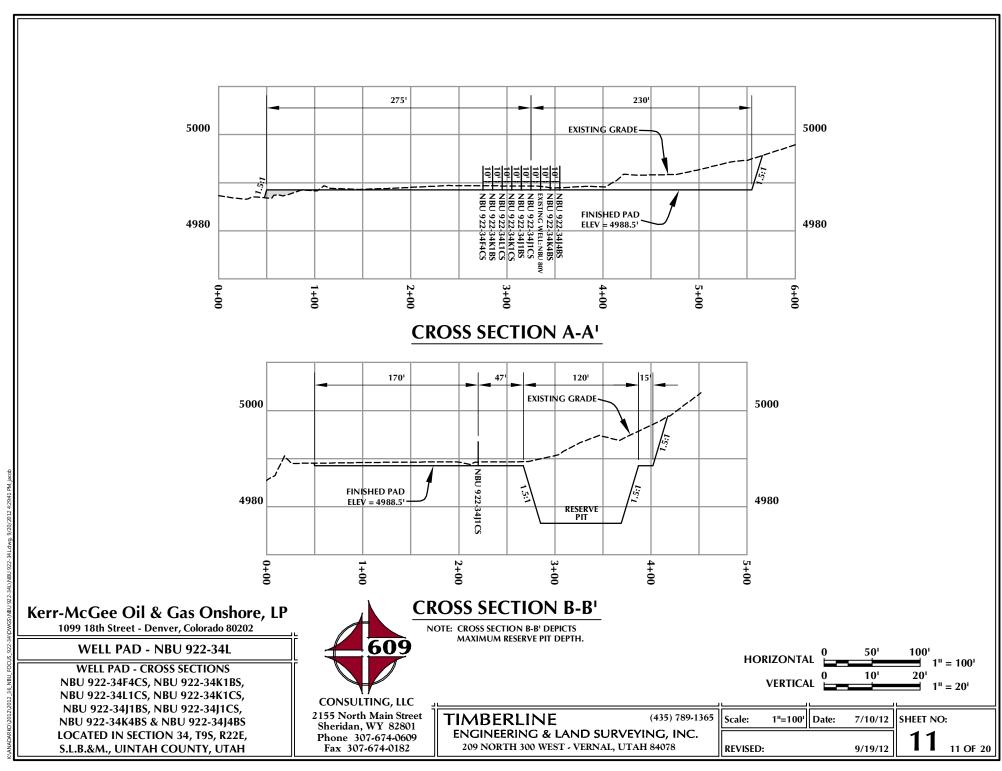
^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

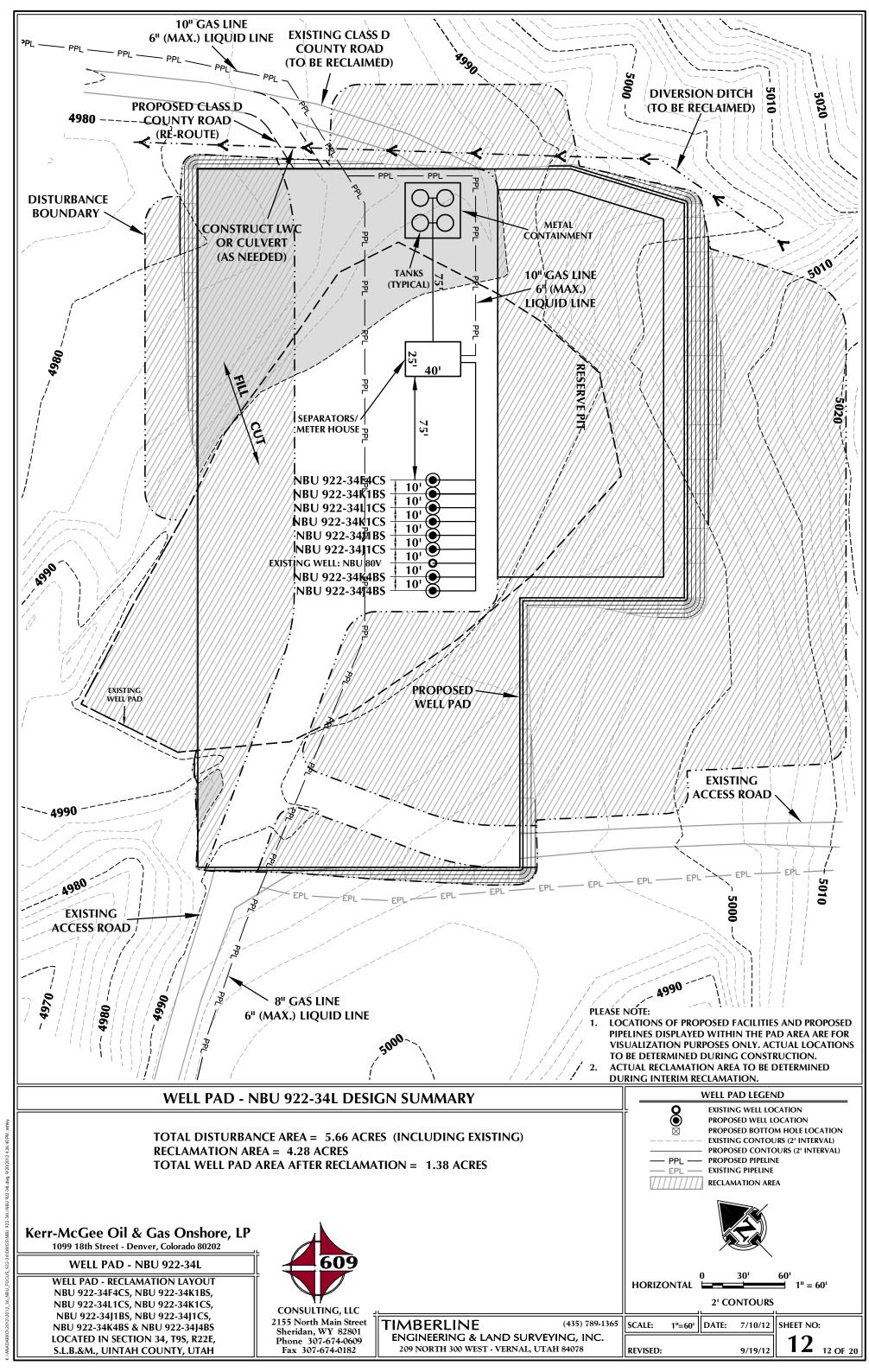


M/FII NIAAA	SURFACE POSITION								BOTTOM HOLE NAD83 NAD27						
WELL NAME	LATITUDE	AD83 LONGIT	UDE LATITU	NAD27 DE LONG	SITUDE	FOOTAGES	LATIT		083 LONGITU	DE	NAD LATITUDE	LONGITUDE	FOOTAGES		
NBU	39°59'27.564		.896" 39°59'27	.689" 109°25	52.437"	2085' FSL	39°59'3	35.421"	109°25'40.4	\rightarrow	39°59'35.546"	109°25'37.988"			
922-34F4CS NBU	39.990990° 39°59'27.493	109.43191 3" 109°25'54			1233° '52.527"	1026' FWL 2078' FSL	39.993° 39°59'3		109.427902 109°25'40.4	_	39.993207° 39°59'32.515"	109.427219° 109°25'37.974"	2151' FWL 2574' FSL		
922-34K1BS	39.990970°	109 23 34		==		1019' FWL	39.9923		109 23 40.4	~ - I	39.992365°	109.427215°	23/4 FSL 2152' FWL		
NBU 922-34L1CS	39°59'27.422 39.990951°	.03 =0 00			52.616	2071' FSL	39°59'2 39.9910		109°25'54.9		39°59'27.901" 39.991084°	109°25'52.497"			
NBU	39.990931 39°59'27.35	109.43196 1" 109°25'55			1282° '52.706"	1012' FWL 2064' FSL	39.9910 39°59'2		109.431932 109°25'40.4			109.431249° 109°25'37.972"	1021 FWL 2242 FSL		
922-34K1CS	39.990931°	109.43199	90° 39.99096	6° 109.43	1307°	1005' FWL	39.9914		109.427897		39.991454°	109.427214°	21521 FWI		
NBU 922-34J1BS	39°59'27.280 39.990911°	0" 109°25'55 109.43201			'52.795" 1332°	2057' FSL 998' FWL	39°59'3 39.9918		109°25'23.5 109.423198		39°59'30.930" 39.991925°	109°25'21.056" 109.422516°	2414' FSL 1821' FEL		
NBU	39°59'27.209	9" 109°25'55	.343" 39°59'27	.334" 109°25	52.884"	2050' FSL	39°59'2	27.525"	109°25'23.5	06"		109°25'21.048"	2082' FSL		
922-34J1CS NBU	39.990891° 39°59'27.068	109.4320 ² 3" 109°25'55			1357° '53.063"	991 FWL 2035 FSL	39.9909 39°59'2		109.423196 109°25'40.4	_	39.991014° 39°59'25.954"	109.422513° 109°25'37.969"	1821' FEL 1910' FSL		
922-34K4BS	39.990852°	109.43209	90° 39.99088	7° 109.43	1407°	977' FWL	39.990	508°	109.427897	0	39.990543°	109.427214°	2152' FWI		
NBU 922-3414BS	39°59'26.997 39.990832°	109°25'55 109.43211		.00 =0	'53.153" 1431°	2028' FSL 970' FWL	39°59'2 39.9900		109°25'23.5 109.423197		39°59'24.360" 39.990100°	109°25'21.053" 109.422515°	1749' FSL 1822' FEL		
NBU 80V	39°59'27.138	3" 109°25'55	.433" 39°59'27	.263" 109°25	52.974"	2042' FSL									
	39.990872°	109.43206		109.43 TIVE COORD		984' FWL	Dosition	to Dotte	ana Hala						
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAS		NAME	NOR		ST	WELL NAM	E NORTH	EAST		
NBU	795.71	1124.61	NBU	496.1	1132	81 NBU		35.9			NBU	178 41	1147.1		
922-34F4CS WELL NAME	NORTH	EAST	922-34K1BS WELL NAME	NORTH	EAS	922-34		NOR			922-34K1CS WELL NAM	5	EAST		
NBU	357.8'	2470.9	NBU	33.0'	2478	71 NBU		-124			NBU	-278.5	2499.3		
922-34J1BS			922-34J1CS			922-34	IK4BS				922-34J4BS				
		78 12 1662 30	*** *** ** ** ** ** ** ** **	10 922 34 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	34 1 CS		$\overline{/}$ (T	o Bot	15"E - 24 tom Hold 9.23750°	<u>)</u>	(To Bo) N81°09'2 N81°4' (To B) (To B) Az= S83°56'1	1.15750° tom Hole) 7"E - 1160.5 5'37"E - 249 Bottom Hole; 2=81.76028 ottom Hole; 96.06361° 1"E - 1181.	(e) 3°		
	IV		CARO 22A.	•						,	(To Bott	2"E - 2514.7 com Hole)	8'-		
WELL WELLS - N	SCALE	& Gas (Denver, Color NBU 9 RFERENCI 4CS, NBU 9	22-34L E PLAT 22-34K1BS,			609 ULTING, LL		DATE	209 NOR	RIN	Az=96 INE G & LAND	.35778° (4. SURVEYINC NAL, UTAH 840	35) 789-136 G, INC.		
Kerr-Mcc 1099 1 WEI WELLS - N NBU NBU	S C A L E Gee Oil 8th Street - D L PAD - L PAD INTE NBU 922-34F- 922-34J1BS,	& Gas (Denver, Colo NBU 9 ERFERENCI 4CS, NBU 9 NBU 922-3 NBU 922-3	Onshore, rado 80202 22-34L E PLAT 22-34K1BS, 4K1CS, 4J1CS,		2155 No	ULTING, LLO	et	DATE 6-4-1	NGINEER 209 NOR SURVEYED:	RIN	Az=96 INE G & LAND 000 WEST - VER SURVEYED B	SURVEYINC NAL, UTAH 840 Y: A.F.	35) 789-136 6, INC. 078		
Kerr-McC 1099 1 WEL WELLS - N NBU NBU NBU	S C A L E Gee Oil 8th Street - D LL PAD - L PAD INTE NBU 922-34F- 922-34L1CS,	& Gas (Denver, Colo NBU 9 RFERENCI 4CS, NBU 9 NBU 922-3 NBU 922-3 & NBU 922-3	Onshore, rado 80202 22-34L E PLAT 22-34K1BS, 4K1CS, 4J1CS, 34J4BS		2155 No Sherida	ULTING, LL	et	DATE 6-4-1 DATE 6-15-	NGINEER 209 NOR SURVEYED: 2 DRAWN:	RIN TH 3	Az=96 INE G & LAND 00 WEST - VER	(4. SURVEYINC NAL, UTAH 840	35) 789-136 G, INC. 078 SHEET NO		









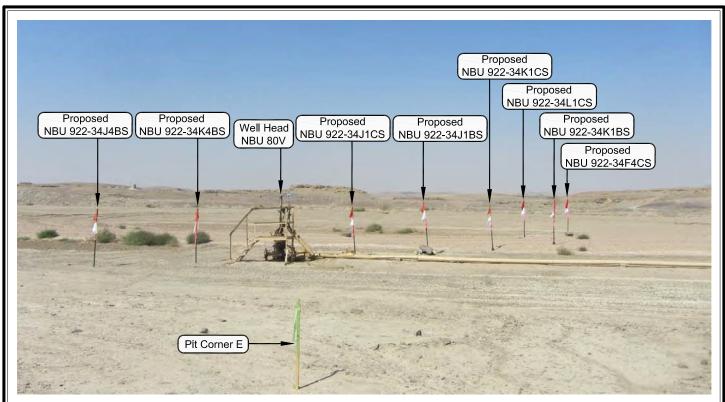


PHOTO VIEW: FROM PIT CORNER E TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHWESTERLY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-34L

LOCATION PHOTOS
NBU 922-34F4CS, NBU 922-34K1BS,
NBU 922-34L1CS, NBU 922-34K1CS,
NBU 922-34J1BS, NBU 922-34J1CS,
NBU 922-34K4BS & NBU 922-34J4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 2155 North Main Street

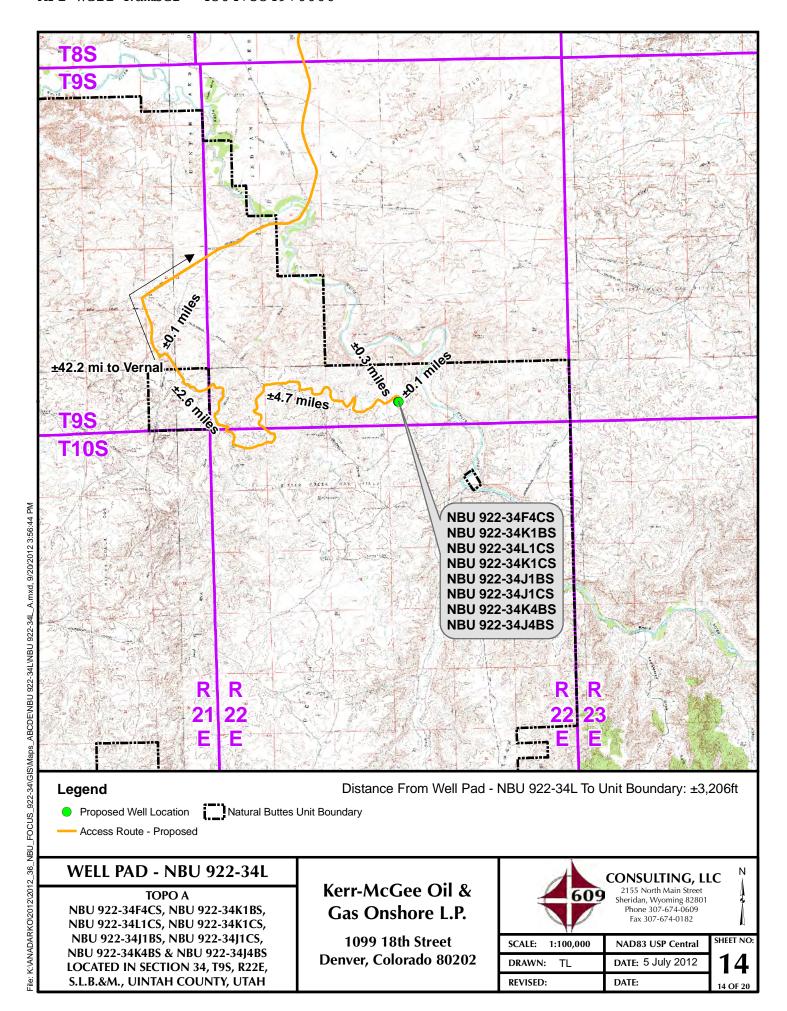
2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

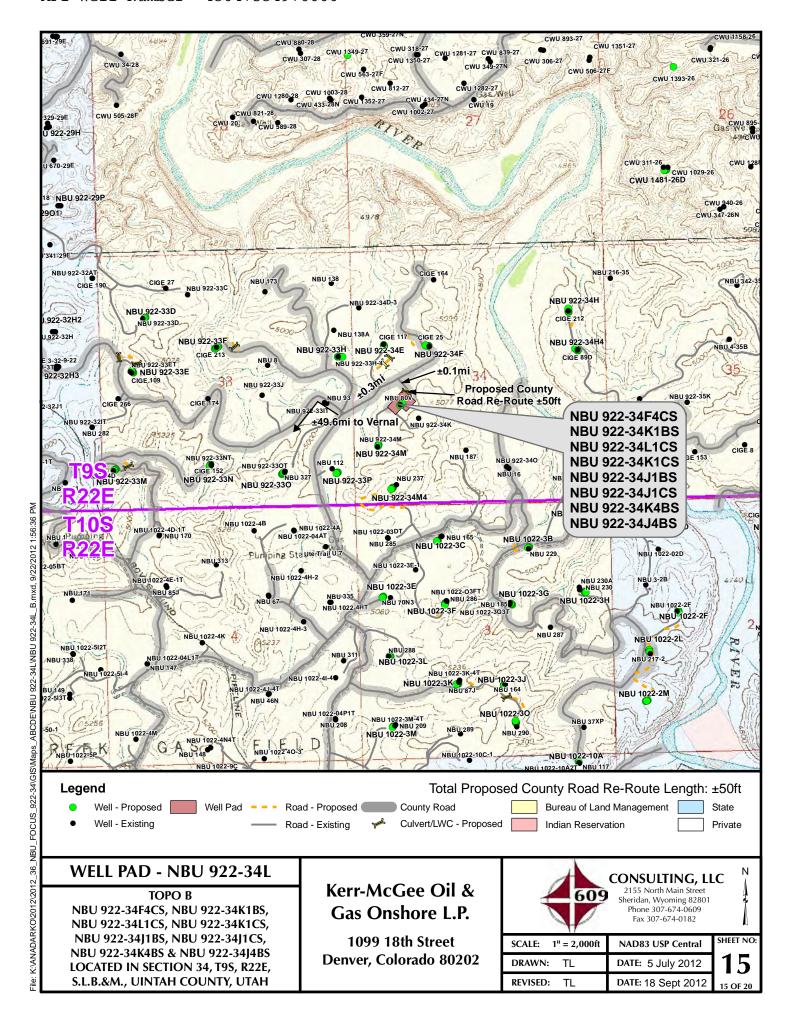
TIMBERLINE

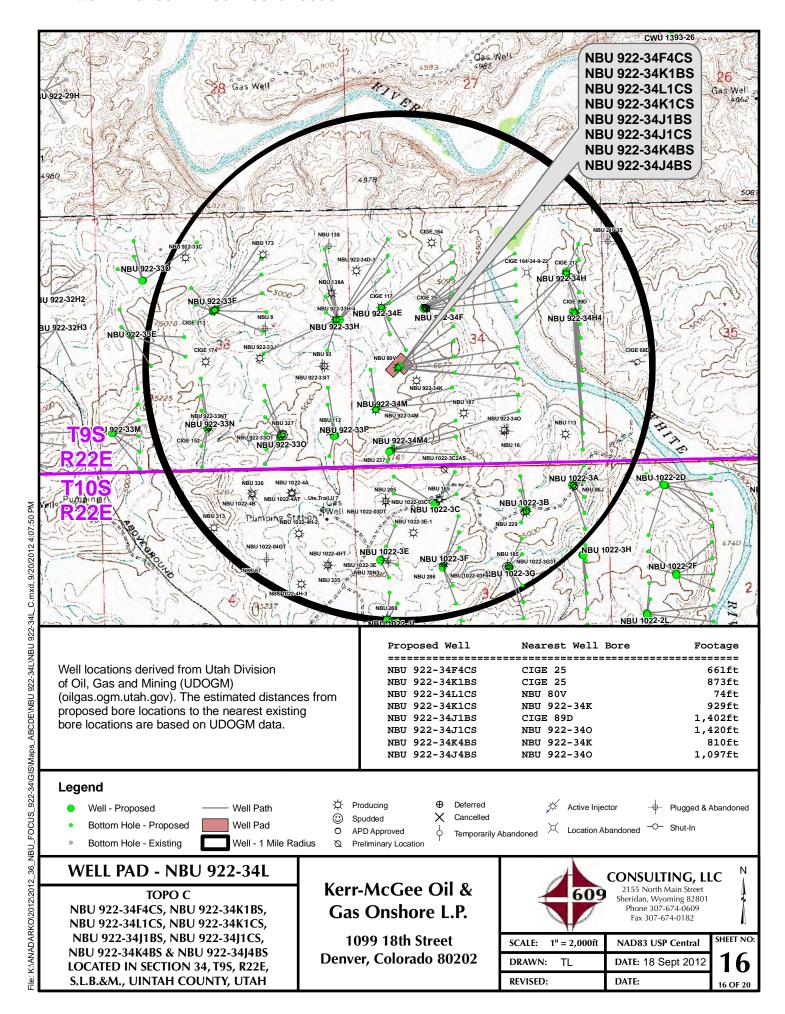
(435) 789-1365

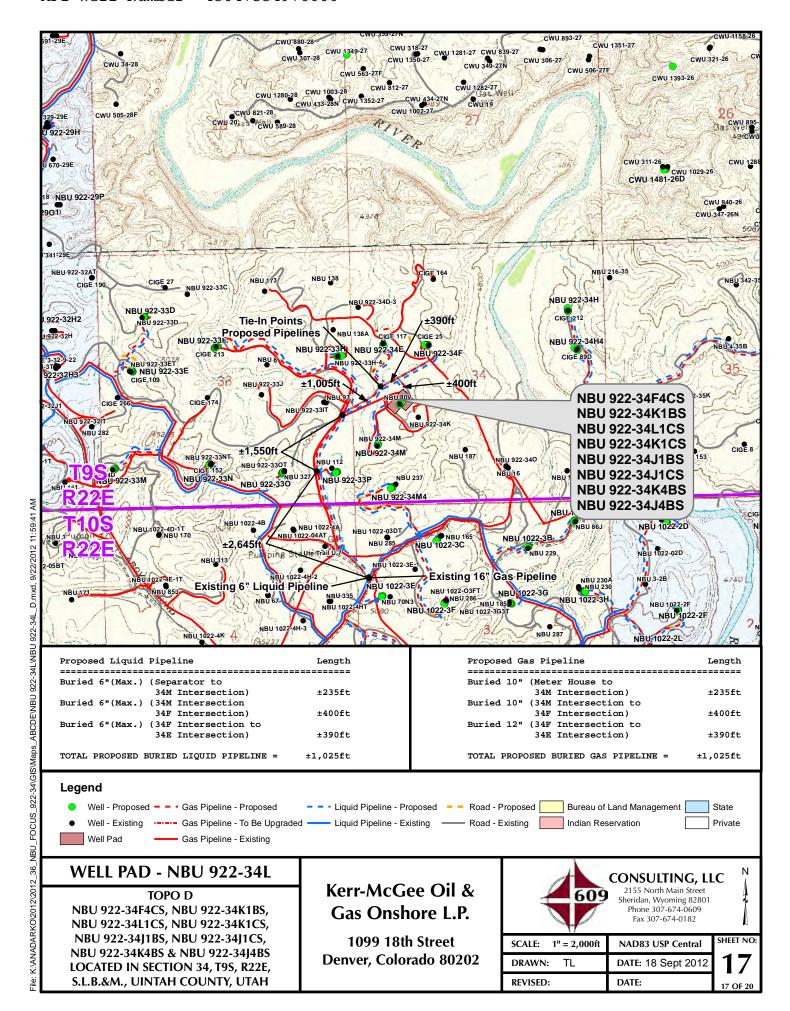
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

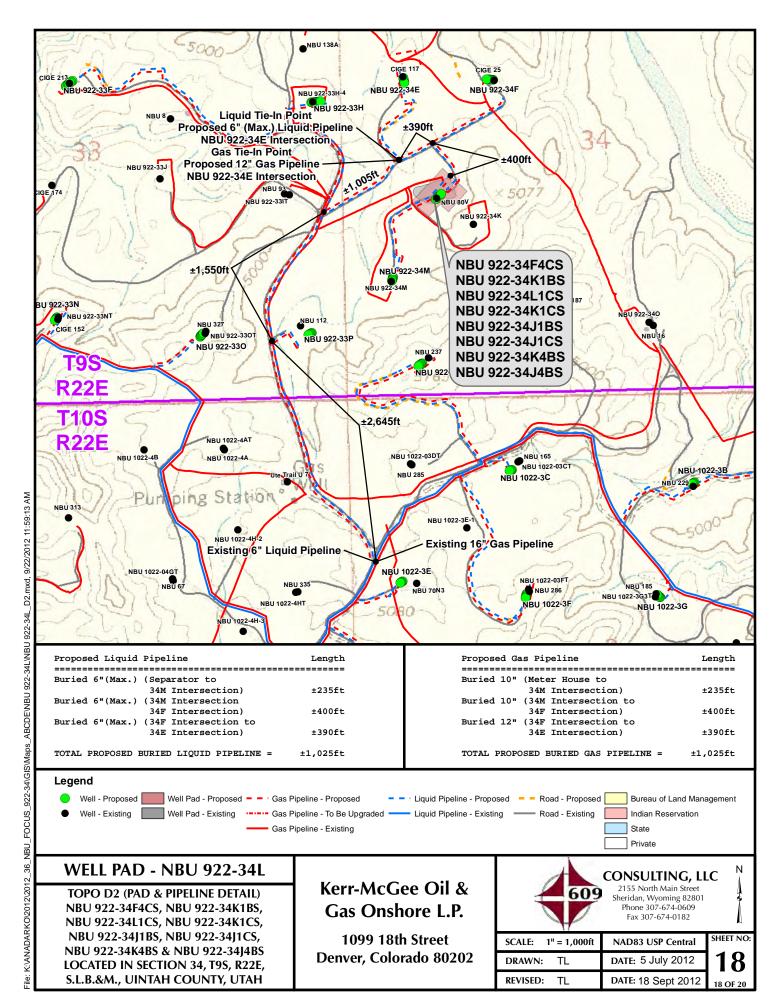
DATE PHOTOS TAKEN: 6-4-12	PHOTOS TAKEN BY: A.F.	SHEET NO:
DATE DRAWN: 6-15-12	DRAWN BY: T.J.R.	13
Date Last Revised:		12 05 20

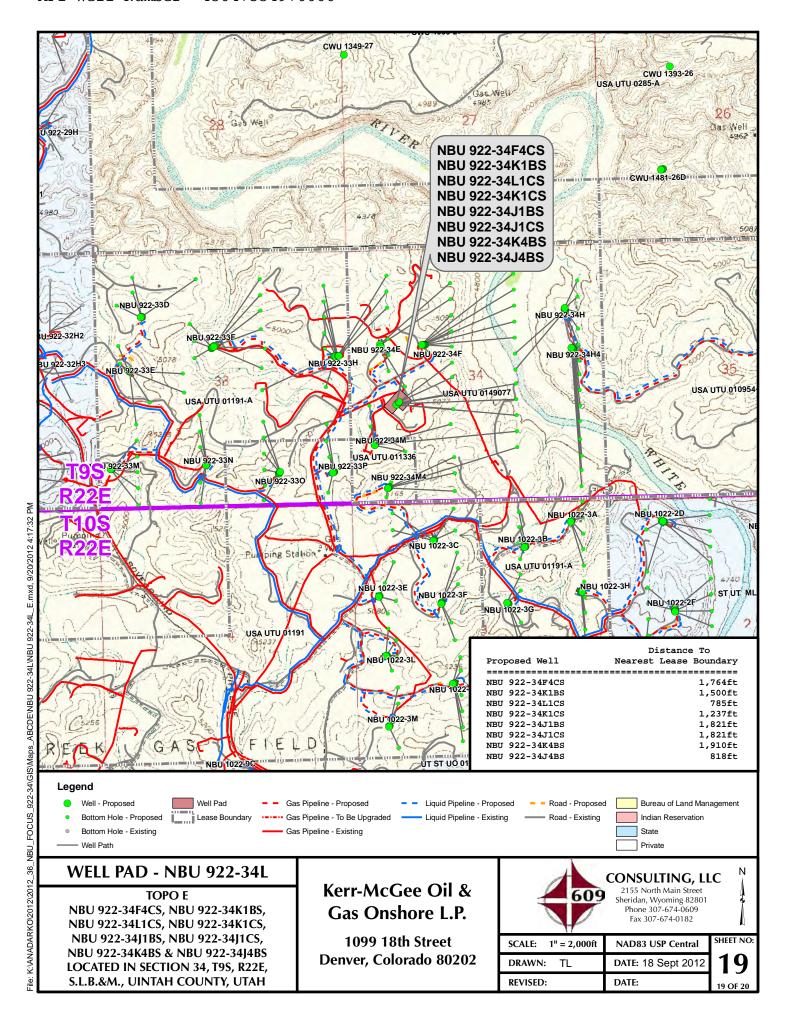












Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 922-34L WELLS – NBU 922-34F4CS, NBU 922-34K1BS, NBU 922-34L1CS, NBU 922-34K1CS, NBU 922-34J1BS, NBU 922-34J1CS, NBU 922-34K4BS & NBU 922-34J4BS Section 34, T9S, R22E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 2.6 miles to a third Class D County Road to the east. Exit left and proceed in an easterly, then northeasterly, then southeasterly direction along the third Class D County Road approximately 4.7 miles to a four-way intersection. Proceed through the four-way intersection in a southeasterly direction to a fourth Class D County Road to the northeast. Proceed in a northeasterly direction along the fourth Class D County Road approximately 0.3 miles to a fifth Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the fifth Class D County Road approximately 0.1 miles to the proposed access road to the south. Follow road flags in a southerly direction approximately 50 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 50.0 miles in a southerly direction.

SHEET 20 OF 20

API Well Number: 43047 Project Outan - UTM (feet), NAD27, Zone 12N

Scientific Drilling

Vertical Section at 14.38° (1500 ft/in)

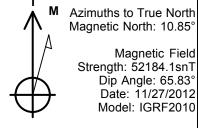
Site: NBU 922-34L PAD Well: NBU 922-34L1CS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

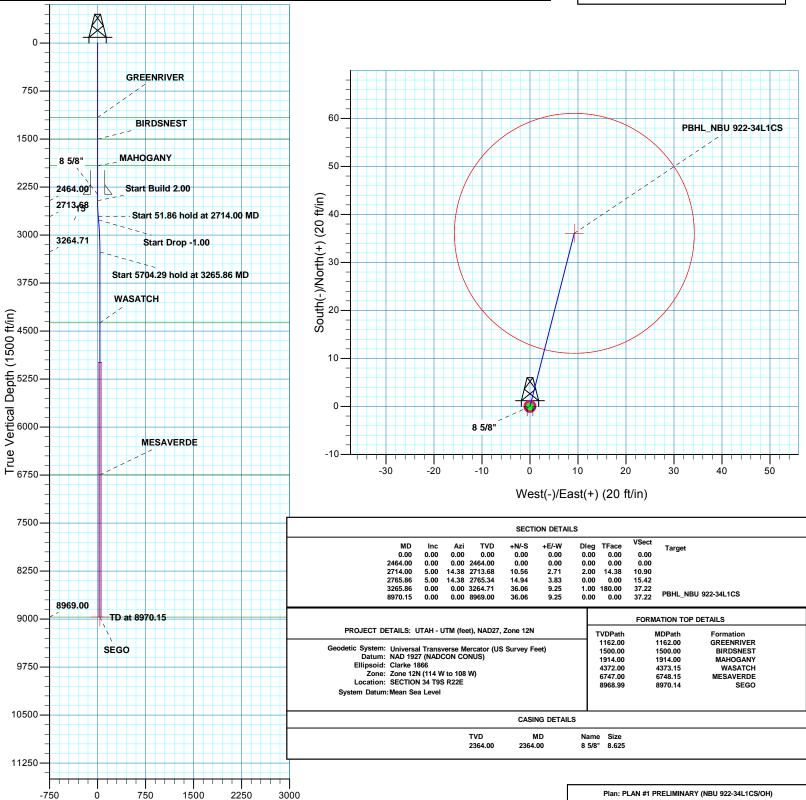






Created By: RobertScott Date: 12:56, November 27 2012

RECEIVED:





US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 922-34L PAD NBU 922-34L1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

27 November, 2012





SDIPlanning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 922-34L PAD

 Well:
 NBU 922-34L1CS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 922-34L1CS

GL 4989 & KB 4 @ 4993.00ft (ASSUMED) GL 4989 & KB 4 @ 4993.00ft (ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Zone 12N (114 W to 108 W)

Mean Sea Level

Site NBU 922-34L PAD, SECTION 34 T9S R22E

Northing: 14,526,606.18 usft Site Position: Latitude: 39.990926 From: Lat/Long Easting: 2,079,795.97 usft Longitude: -109.431357 **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 1.01 13.200 in

System Datum:

.....

Well NBU 922-34L1CS, 2071 FSL 1012 FWL

 Well Position
 +N/-S
 21.49 ft
 Northing:
 14,526,628.03 usft
 Latitude:
 39.990985

 +E/-W
 21.01 ft
 Easting:
 2,079,816.61 usft
 Longitude:
 -109.431282

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 4,989.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 12/15/12 10.85 65.83 52.184

PLAN #1 PRELIMINARY Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 14.38

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,464.00	0.00	0.00	2,464.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,714.00	5.00	14.38	2,713.68	10.56	2.71	2.00	2.00	0.00	14.38	
2,765.86	5.00	14.38	2,765.34	14.94	3.83	0.00	0.00	0.00	0.00	
3,265.86	0.00	0.00	3,264.71	36.06	9.25	1.00	-1.00	0.00	180.00	
8,970.15	0.00	0.00	8,969.00	36.06	9.25	0.00	0.00	0.00	0.00 PE	3HL_NBU 922-34L



SDIPlanning Report



Database: EDM5000-RobertS-Local Company: US ROCKIES REGION P

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

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Survey Calculation Method:

Well NBU 922-34L1CS

GL 4989 & KB 4 @ 4993.00ft (ASSUMED) GL 4989 & KB 4 @ 4993.00ft (ASSUMED)

True

Minimum Curvature

sign:	PLAN #1 PRE	LIMINARY							
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,162.00	0.00	0.00	1,162.00	0.00	0.00	0.00	0.00	0.00	0.00
GREENRIVE									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
BIRDSNEST	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00		0.00	,	0.00	0.00	0.00		0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,914.00	0.00	0.00	1,914.00	0.00	0.00	0.00	0.00	0.00	0.00
MAHOGANY									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,364.00	0.00	0.00	2,364.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"	0.00	0.00	2,0000	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,464.00	0.00	0.00	2,464.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2		0.00	2,707.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.72	14.38	2,500.00	0.22	0.06	0.23	2.00	2.00	0.00
2,600.00	2.72	14.38	2,599.95	3.13	0.80	3.23	2.00	2.00	0.00
2,700.00	4.72	14.38	2,699.73	9.41	2.41	9.72	2.00	2.00	0.00
2,714.00	5.00	14.38	2,713.68	10.56	2.71	10.90	2.00	2.00	0.00
	old at 2714.00 M								
2,765.86	5.00	14.38	2,765.34	14.94	3.83	15.42	0.00	0.00	0.00
Start Drop -1									
2,800.00	4.66	14.38	2,799.36	17.72	4.54	18.30	1.00	-1.00	0.00
2,900.00	3.66	14.38	2,899.10	24.75	6.35	25.55	1.00	-1.00	0.00
3,000.00	2.66	14.38	2,998.95	30.08	7.71	31.06	1.00	-1.00	0.00
3,100.00	1.66	14.38	3,098.87	33.73	8.65	34.82	1.00	-1.00	0.00
3,200.00	0.66	14.38	3,198.85	35.69	9.15	36.85	1.00	-1.00	0.00
3,265.86	0.00	0.00	3,264.71	36.06	9.25	37.22	1.00	-1.00	0.00
	hold at 3265.86		5,251.71	50.00	0.20	J1.LL	1.00	1.00	0.00
Start 3/04.28	1101u at 3203.00	, MID							
3,300.00	0.00	0.00	3,298.85	36.06	9.25	37.22	0.00	0.00	0.00
3,400.00	0.00	0.00	3,398.85	36.06	9.25	37.22	0.00	0.00	0.00
3,500.00	0.00	0.00	3,498.85	36.06	9.25	37.22	0.00	0.00	0.00
3,600.00	0.00	0.00	3,598.85	36.06	9.25	37.22	0.00	0.00	0.00
3,700.00	0.00	0.00	3,698.85	36.06	9.25	37.22	0.00	0.00	0.00



SDIPlanning Report



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Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 922-34L PAD

 Well:
 NBU 922-34L1CS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

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MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 922-34L1CS

GL 4989 & KB 4 @ 4993.00ft (ASSUMED) GL 4989 & KB 4 @ 4993.00ft (ASSUMED)

True

Minimum Curvature

esign:	PLAN #1 PRE	LIMINART							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	0.00	0.00	3,798.85	36.06	9.25	37.22	0.00	0.00	0.00
3,900.00	0.00	0.00	3,898.85	36.06	9.25	37.22	0.00	0.00	0.00
4,000.00	0.00	0.00	3,998.85	36.06	9.25	37.22	0.00	0.00	0.00
4,100.00	0.00	0.00	4,098.85	36.06	9.25	37.22	0.00	0.00	0.00
4,200.00	0.00	0.00	4,198.85	36.06	9.25	37.22	0.00	0.00	0.00
4,300.00	0.00	0.00	4,298.85	36.06	9.25	37.22	0.00	0.00	0.00
4,373.15	0.00	0.00	4,372.00	36.06	9.25	37.22	0.00	0.00	0.00
WASATCH	0.00	0.00	4,072.00	00.00	0.20	07.22	0.00	0.00	0.00
	0.00	0.00	4 200 05	26.06	0.25	27.22	0.00	0.00	0.00
4,400.00		0.00	4,398.85	36.06	9.25	37.22	0.00		
4,500.00	0.00	0.00	4,498.85	36.06	9.25	37.22	0.00	0.00	0.00
4,600.00	0.00	0.00	4,598.85	36.06	9.25	37.22	0.00	0.00	0.00
4,700.00	0.00	0.00	4,698.85	36.06	9.25	37.22	0.00	0.00	0.00
4,800.00	0.00	0.00	4,798.85	36.06	9.25	37.22	0.00	0.00	0.00
4,900.00	0.00	0.00	4,898.85	36.06	9.25	37.22	0.00	0.00	0.00
5,000.00	0.00	0.00	4,998.85	36.06	9.25	37.22	0.00	0.00	0.00
5,100.00	0.00	0.00	5,098.85	36.06	9.25	37.22	0.00	0.00	0.00
5,200.00	0.00	0.00	5,198.85	36.06	9.25	37.22	0.00	0.00	0.00
5,300.00	0.00	0.00	5,298.85	36.06	9.25	37.22	0.00	0.00	0.00
5,400.00	0.00	0.00	5,398.85	36.06	9.25	37.22	0.00	0.00	0.00
5,500.00	0.00	0.00	5,498.85	36.06	9.25	37.22	0.00	0.00	0.00
5,600.00	0.00	0.00	5,598.85	36.06	9.25	37.22	0.00	0.00	0.00
3,000.00	0.00	0.00	3,390.03		9.23	37.22	0.00	0.00	0.00
5,700.00	0.00	0.00	5,698.85	36.06	9.25	37.22	0.00	0.00	0.00
5,800.00	0.00	0.00	5,798.85	36.06	9.25	37.22	0.00	0.00	0.00
5,900.00	0.00	0.00	5,898.85	36.06	9.25	37.22	0.00	0.00	0.00
6,000.00	0.00	0.00	5,998.85	36.06	9.25	37.22	0.00	0.00	0.00
6,100.00	0.00	0.00	6,098.85	36.06	9.25	37.22	0.00	0.00	0.00
6,200.00	0.00	0.00	6,198.85	36.06	9.25	37.22	0.00	0.00	0.00
6,300.00	0.00	0.00	6,298.85	36.06	9.25	37.22	0.00	0.00	0.00
6,400.00	0.00	0.00	6,398.85	36.06	9.25	37.22	0.00	0.00	0.00
6,500.00	0.00	0.00	6,498.85	36.06	9.25	37.22	0.00	0.00	0.00
6,600.00	0.00	0.00	6,598.85	36.06	9.25	37.22	0.00	0.00	0.00
6,700.00	0.00	0.00	6,698.85	36.06	9.25	37.22	0.00	0.00	0.00
6,748.15	0.00	0.00	6,747.00	36.06	9.25	37.22	0.00	0.00	0.00
MESAVERDE									
6,800.00	0.00	0.00	6,798.85	36.06	9.25	37.22	0.00	0.00	0.00
6,900.00	0.00	0.00	6,898.85	36.06	9.25	37.22	0.00	0.00	0.00
7,000.00	0.00	0.00	6,998.85	36.06	9.25	37.22	0.00	0.00	0.00
7,100.00	0.00	0.00	7,098.85	36.06	9.25	37.22	0.00	0.00	0.00
7,200.00	0.00	0.00	7,198.85	36.06	9.25	37.22	0.00	0.00	0.00
7,300.00	0.00	0.00	7,298.85	36.06	9.25	37.22	0.00	0.00	0.00
7,400.00	0.00	0.00	7,398.85	36.06	9.25	37.22	0.00	0.00	0.00
7,500.00	0.00	0.00	7,498.85	36.06	9.25	37.22	0.00	0.00	0.00
7,600.00	0.00	0.00	7,598.85	36.06	9.25	37.22	0.00	0.00	0.00
7,700.00	0.00	0.00	7,698.85	36.06	9.25	37.22	0.00	0.00	0.00
7,800.00	0.00	0.00	7,798.85	36.06	9.25	37.22	0.00	0.00	0.00
7,900.00	0.00	0.00	7,898.85	36.06	9.25	37.22	0.00	0.00	0.00
8,000.00	0.00	0.00	7,998.85	36.06	9.25	37.22	0.00	0.00	0.00
8,100.00	0.00	0.00	8,098.85	36.06	9.25	37.22	0.00	0.00	0.00
8,200.00	0.00	0.00	8,198.85	36.06	9.25	37.22	0.00	0.00	0.00
8,300.00	0.00	0.00	8,298.85	36.06	9.25	37.22	0.00	0.00	0.00
8,400.00	0.00	0.00	8,398.85	36.06	9.25	37.22	0.00	0.00	0.00
8,500.00	0.00	0.00	8,498.85	36.06	9.25	37.22	0.00	0.00	0.00
0 600 00	0.00	0.00	0 500 05				0.00	0.00	0.00
8,600.00	0.00	0.00	8,598.85	36.06	9.25	37.22	0.00	0.00	0.00
8,700.00	0.00	0.00	8,698.85	36.06	9.25	37.22	0.00	0.00	0.00



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US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

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 UTAH - UTM (feet),

 Site:
 NBU 922-34L PAD

 Well:
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Wellbore: OH

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Survey Calculation Method:

Well NBU 922-34L1CS

GL 4989 & KB 4 @ 4993.00ft (ASSUMED) GL 4989 & KB 4 @ 4993.00ft (ASSUMED)

True

Minimum Curvature

nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00 8,900.00 8,970.14	0.00 0.00 0.00	0.00 0.00 0.00	8,798.85 8,898.85 8,968.99	36.06 36.06 36.06	9.25 9.25 9.25	37.22 37.22 37.22	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
SEGO									
8,970.15 TD at 8970.1	0.00 5 - PBHL_NBU 9	0.00 922-34L1CS	8,969.00	36.06	9.25	37.22	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-34L1C\$ - plan hits target cent - Circle (radius 25.00		0.00	8,969.00	36.06	9.25	14,526,664.25	2,079,825.21	39.991084	-109.431249

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,364.00	2,364.00 8 5/		8.625	11.000

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,162.00	1,162.00	GREENRIVER			
	1,500.00	1,500.00	BIRDSNEST			
	1,914.00	1,914.00	MAHOGANY			
	4,373.15	4,372.00	WASATCH			
	6,748.15	6,747.00	MESAVERDE			
	8,970.14	8,968.99	SEGO		0.00	
	-,	2,300.00			0.00	

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
2,464.00	2,464.00	0.00	0.00	Start Build 2.00
2,714.00	2,713.68	10.56	2.71	Start 51.86 hold at 2714.00 MD
2,765.86	2,765.34	14.94	3.83	Start Drop -1.00
3,265.86	3,264.71	36.06	9.25	Start 5704.29 hold at 3265.86 MD
8,970.15	8,969.00	36.06	9.25	TD at 8970.15

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS / NBU 922-34K4BS / NBU 922-34L1CS Surface Use Plan of Operations 1 of 6

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 922-34L PAD

<u>API #</u>	Surface:	NBU 922-34F4CS 2085 FSL / 1026 FWL 2408 FNL / 2151 FWL	NWSW SENW
<u>API #</u>	Surface:	NBU 922-34J1BS 2057 FSL / 998 FWL 2414 FSL / 1821 FEL	NWSW NWSE
<u>API #</u>	Surface:	NBU 922-34J1CS 2050 FSL / 991 FWL 2082 FSL / 1821 FEL	NWSW NWSE
<u>API #</u>	Surface:	NBU 922-34J4BS 2028 FSL / 970 FWL 1749 FSL / 1822 FEL	NWSW NWSE
<u>API #</u>	Surface:	NBU 922-34K1BS 2078 FSL / 1019 FWL 2574 FSL / 2152 FWL	
<u>API #</u>	Surface:	NBU 922-34K1CS 2064 FSL / 1005 FWL 2242 FSL / 2152 FWL	NWSW NESW
<u>API #</u>	Surface:	NBU 922-34K4BS 2035 FSL / 977 FWL 1910 FSL / 2152 FWL	NWSW NESW
<u>API #</u>	Surface:	NBU 922-34L1CS 2071 FSL / 1012 FWL 2107 FSL / 1021 FWL	NWSW NWSW

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS / NBU 922-34K4BS / NBU 922-34L1CS Surface Use Plan of Operations 2 of 6

An on-site meeting was held on August 16-17, 2012. Present were:

- Dave Gordon, Tyler Cox, Aaron Roe and Brian Barnett BLM;
- · Jessi Brunson USFWS;
- · Bill Knapp ICF Consulting;
- · Jacob Dunham 609 Consulting;
- · Mitch Batty Timberline Engineering & Land Surveying, Inc.; and
- · Gina Becker, Charles Chase, Lindsey Frazier, Doyle Holmes, Randy Townley and Casey McKee- Kerr-McGee

A. Existing Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

B. New or Reconstructed Access Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

The following segments are "on-lease"

±50' (0.01 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, from the edge of pad to the T-intersection in NW/4 SW/4. Please refer to Topo B.

C. Location of Existing Wells:

Please refer to Topo C for exiting wells.

D. Location of Existing and/or Proposed Facilities:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will expand the existing pad for the NBU 80V, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on of pad November 20, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

GAS GATHERING

Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.

The total gas gathering pipeline distance from the meter to the tie in point is $\pm 6,225$ ' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

±235' (0.04 miles) – Section 34 T9S R22E (NW/4 SW/4) – On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS / NBU 922-34K4BS / NBU 922-34L1CS Surface Use Plan of Operations 3 of 6

- ±400' (0.1 miles) Section 34 T9S R22E (NW/4 SW/4) On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed buried 12" gas gathering pipeline at the NBU 922-34F Pad intersection . This pipeline will be used concurrently with the NBU 922-34M Pad. Please refer to Exhibit A, Line 13.
- ±1,395' (0.3 miles) Section 34 T9S R22E (NW/4 SW/4) On-lease UTU-0149077 and UTU-01191-A, BLM surface, New 12" buried gas gathering pipeline from the NBU 922-34F Pad pipeline intersection to tie-in to the proposed buried 16" gas gathering pipeline at the NBU 922-33H Pad intersection. This pipeline will be used concurrently with the NBU 922-34E, NBU 922-34F and NBU 922-34M Pads. Please refer to Exhibit A, Lines 12 and 11.

The following segments require a ROW. Anadarko Uintah Midstream (AUM) will apply for an SF-299/POD under separate cover. Listed below is the gas gathering pipeline distances:

±4,195' (0.8 miles) – Section 33 T9S R22E and Section 3 and 4 T10S R22E – On-lease UTU 01191-A and UTU 01191, BLM surface, New 16" buried gas gathering pipeline from the NBU 922-33H Pad pipeline intersection to the existing 16" buried gas pipeline in 1022-3 at the NBU 1022-3E Pad intersection. Please refer to Exhibit A- Line 10.

LIQUID GATHERING

Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 6,225$ ' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

- ±235' (0.04 miles) Section 34 T9S R22E (NW/4 SW/4) On-lease UTU-0149077, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±400' (0.1 miles) Section 34 T9S R22E (NW/4 SW/4) On-lease UTU-0149077, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-34F Pad intersection . This pipeline will be used concurrently with the NBU 922-34M Pad. Please refer to Exhibit B, Line 13.
- ±1,395' (0.3 miles) Section 34 T9S R22E (NW/4 SW/4) On-lease UTU-0149077 and UTU-01191-A, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-34F Pad pipeline intersection to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-33H Pad intersection. This pipeline will be used concurrently with the NBU 922-34E, NBU 922-34F and NBU 922-34M Pads. Please refer to Exhibit B, Lines 12 and 11.
- ±4,195' (0.8 miles) Section 33 T9S R22E and Section 3 and 4 T10S R22E On-lease UTU 01191-A and UTU 01191, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-33H Pad pipeline intersection to the existing 6" buried liquid pipeline in 1022-3 at the NBU 1022-3E Pad intersection. This pipeline will be used concurrently with the NBU 922-33F, NBU 922-33H, NBU 922-34E, NBU 922-34F, NBU 922-34M and NBU 922-33P Pads. Please refer to Exhibit B, Line 10.

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS /

NBU 922-34K4BS / NBU 922-34L1CS

Surface Use Plan of Operations 4 of 6

Pipeline Gathering Construction

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

The Anadarko Completions Transportation System (ACTS) information:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

E. Location and Types of Water Supply:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Water will be hauled to location over the roads marked on Maps A and B.

F. Construction Materials:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

G. Methods for Handling Waste:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Materials Management

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

J. Plans for Surface Reclamation:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Interim Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS /

NBU 922-34K4BS / NBU 922-34L1CS

Surface Use Plan of Operations 5 of 6

Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Measures Common to Interim and Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Weed Control

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Monitoring

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

K. Surface/Mineral Ownership:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

L. Other Information:

Cultural and Paleontological Resources

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Resource Reports:

A Class I literature survey was completed on September 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC-12-264.

A paleontological reconnaissance survey was completed on September 20, 2012 by SWCA Environmental Consultants. For additional details please refer to report SWCA-UT12-14314-178.

Biological field survey was completed on August 25, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-845.

Proposed Action Annual Emissions Tables:

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Surface Use Plan of Operations 6 of 6

NBU 922-34F4CS / NBU 922-34J1BS / NBU 922-34J1CS NBU 922-34J4BS / NBU 922-34K1BS / NBU 922-34K1CS / NBU 922-34K4BS / NBU 922-34L1CS

M. Lessee's or Operators' Representative & Certification:

Gina T. Becker Senior Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6086 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

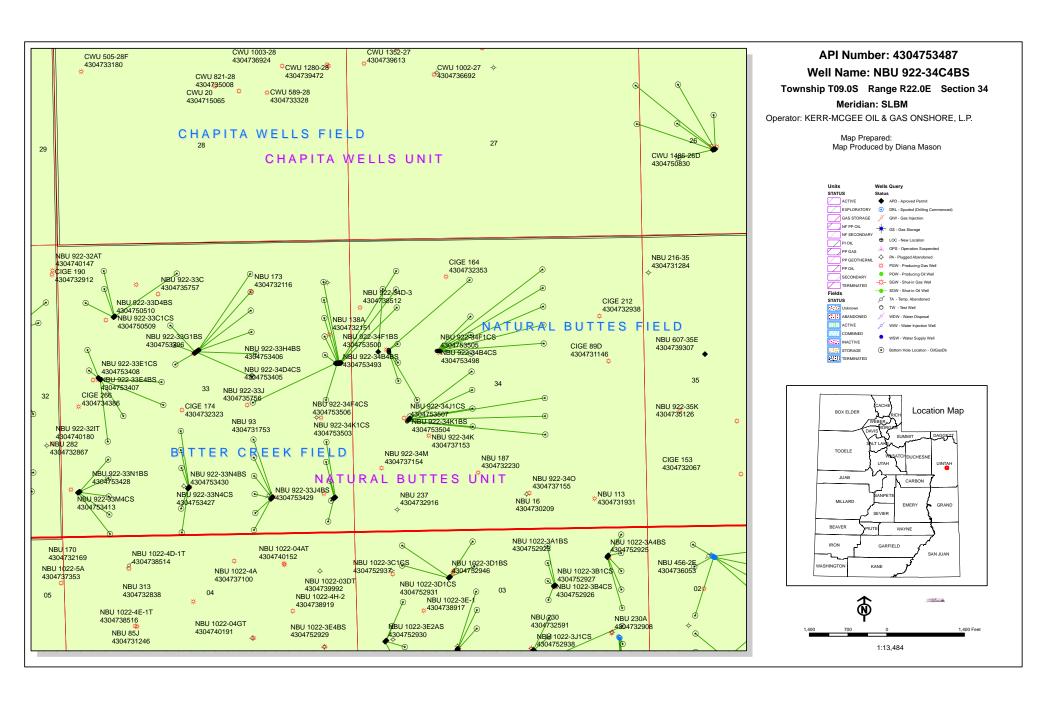
Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Gina T.Becker

November 20, 2012

Date



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

January 15, 2013

Memorandum

To: Assistant Field Office Manager Minerals,

Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2013 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-17C PAD

43-047-53476 NBU 921-17C4CS Sec 17 T09S R21E 0629 FNL 2001 FWL BHL Sec 17 T09S R21E 1074 FNL 2155 FWL 43-047-53483 NBU 921-17F1BS Sec 17 T09S R21E 0634 FNL 1993 FWL BHL Sec 17 T09S R21E 1405 FNL 2154 FWL NBU 921-17D PAD 43-047-53477 NBU 921-17E4BS Sec 17 T09S R21E 0953 FNL 0416 FWL BHL Sec 17 T09S R21E 2231 FNL 0825 FWL 43-047-53478 NBU 921-17E1CS Sec 17 T09S R21E 0959 FNL 0424 FWL BHL Sec 17 T09S R21E 1901 FNL 0825 FWL 43-047-53479 NBU 921-17E1BS Sec 17 T09S R21E 0965 FNL 0432 FWL BHL Sec 17 T09S R21E 1570 FNL 0826 FWL 43-047-53480 NBU 921-17D4BS Sec 17 T09S R21E 0982 FNL 0457 FWL BHL Sec 17 T09S R21E 0909 FNL 0827 FWL 43-047-53481 NBU 921-17D1CS Sec 17 T09S R21E 0976 FNL 0449 FWL BHL Sec 17 T09S R21E 0578 FNL 0827 FWL Sec 17 T09S R21E 0970 FNL 0440 FWL 43-047-53482 NBU 921-17D1BS BHL Sec 17 T09S R21E 0148 FNL 0834 FWL NBU 922-34F PAD 43-047-53484 NBU 922-34G1CS Sec 34 T09S R22E 2030 FNL 1588 FWL BHL Sec 34 T09S R22E 1913 FNL 1820 FEL Sec 34 T09S R22E 2029 FNL 1578 FWL 43-047-53485 NBU 922-34G1BS BHL Sec 34 T09S R22E 1580 FNL 1820 FEL Sec 34 T09S R22E 2032 FNL 1598 FWL 43-047-53486 NBU 922-34F4BS BHL Sec 34 T09S R22E 2076 FNL 2151 FWL

RECEIVED: January 15, 2013

API #	Ţ		LOCATION							
(Proposed PZ	WASA	ATCH-MESA VERD	Ξ)							
43-047-53492	NBU	922-34B1CS BHL								
43-047-53493	NBU	922-34B4BS BHL								
43-047-53498	NBU	922-34B4CS BHL								
43-047-53500	NBU	922-34F1BS BHL								
43-047-53505	NBU	922-34F1CS BHL	Sec Sec	34 34	T09S T09S	R22E R22E	2026 1744	FNL FNL	1559 2151	FWL FWL
NBU 922-34E I 43-047-53487	P AD NBU	922-34C4BS BHL	Sec	34	T09S	R22E	1991	FNL	0662	FWL
43-047-53488	NBU	922-34E1CS BHL								
43-047-53489	NBU	922-34E4BS BHL								
43-047-53490	NBU	922-34E4CS BHL								
		922-34L1AS BHL	Sec Sec	34 34	T09S T09S	R22E R22E	2030 2406	FNL FSL	0668 1156	FWL FWL
NBU 922-34L I 43-047-53497	P AD NBU	922-34L1CS BHL	Sec	34	T09S	R22E	2071	FSL	1012	FWL
43-047-53499	NBU	922-34K4BS BHL								
43-047-53501	NBU	922-34J1BS BHL								
43-047-53502	NBU	922-34J4BS BHL				R22E R22E				
43-047-53503	NBU	922-34K1CS BHL				R22E R22E				
43-047-53504	NBU	922-34K1BS BHL				R22E R22E				
43-047-53506	NBU	922-34F4CS BHL				R22E R22E				
		922-34J1CS BHL				R22E R22E				
NBU 922-34M I 43-047-53508		922-34J4CS BHL				R22E R22E				
43-047-53509	NBU	922-34K4CS BHL				R22E R22E				
43-047-53510	NBU	922-34L2DS BHL				R22E R22E				
43-047-53511	NBU	922-34L3DS BHL								

Page 2

LOCATION API # WELL NAME (Proposed PZ WASATCH-MESA VERDE) Sec 34 T09S R22E 1194 FSL 0493 FWL 43-047-53512 NBU 922-34M1BS BHL Sec 34 T09S R22E 1054 FSL 1135 FWL NBU 922-34M4 PAD BHL Sec 34 T09S R22E 0415 FSL 0826 FWL 43-047-53514 NBU 922-34M4CS Sec 34 T09S R22E 0295 FSL 0747 FWL BHL Sec 34 T09S R22E 0115 FSL 0716 FWL 43-047-53515 NBU 922-34N1CS Sec 34 T09S R22E 0319 FSL 0779 FWL BHL Sec 34 T09S R22E 0913 FSL 2153 FWL BHL Sec 34 T09S R22E 0581 FSL 2153 FWL 43-047-53517 NBU 922-34N4CS Sec 34 T09S R22E 0301 FSL 0755 FWL BHL Sec 34 T09S R22E 0201 FSL 2140 FWL 43-047-53518 NBU 922-3401BS Sec 34 T09S R22E 0313 FSL 0771 FWL BHL Sec 34 T09S R22E 1083 FSL 1822 FEL NBU 921-17G PAD 43-047-53519 NBU 921-17B4CS Sec 17 T09S R21E 1527 FNL 2258 FEL BHL Sec 17 T09S R21E 1239 FNL 1823 FEL 43-047-53520 NBU 921-17F1CS Sec 17 T09S R21E 1529 FNL 2288 FEL BHL Sec 17 T09S R21E 1736 FNL 2152 FWL 43-047-53521 NBU 921-17F4BS Sec 17 T09S R21E 1528 FNL 2278 FEL BHL Sec 17 T09S R21E 2066 FNL 2151 FWL 43-047-53523 NBU 921-17G4BS Sec 17 T09S R21E 1528 FNL 2268 FEL BHL Sec 17 T09S R21E 2106 FNL 1832 FEL NBU 921-17H PAD 43-047-53522 NBU 921-17A4BS Sec 17 T09S R21E 2074 FNL 0557 FEL BHL Sec 17 T09S R21E 0744 FNL 0496 FEL 43-047-53524 NBU 921-17A4CS Sec 17 T09S R21E 2076 FNL 0547 FEL BHL Sec 17 T09S R21E 1074 FNL 0496 FEL 43-047-53525 NBU 921-17H1BS Sec 17 T09S R21E 2078 FNL 0538 FEL BHL Sec 17 T09S R21E 1405 FNL 0496 FEL

Michael L. Coulthard Digitally signed by Michael L. Coulthard Distraction Michael L. Coulthard, o-Bureau of Land Management, oueBranch of Minerals, email=Michael_Coulthard@blm.gov, c=US Date: 2013.01.15 14:15:41-0700'

S Sec 17 T09S R21E 2080 FNL 0528 FEL BHL Sec 17 T09S R21E 1736 FNL 0495 FEL

Sec 17 T09S R21E 2082 FNL 0518 FEL BHL Sec 17 T09S R21E 2495 FNL 0489 FEL

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:1-15-13

43-047-53526 NBU 921-17H1CS

43-047-53527 NBU 921-17H4CS

Page 3

API	Well Name	Surface Location				
43-047-53476	NBU 921-17C4CS	Sec 17	T09S	R21E	0629 FNL 2001 FWL	
43-047-53477	NBU 921-17E4BS	Sec 17	T09S	R21E	0953 FNL 0416 FWL	
43-047-53478	NBU 921-17E1CS	Sec 17	T09S	R21E	0959 FNL 0424 FWL	
43-047-53479	NBU 921-17E1BS	Sec 17	T09S	R21E	0965 FNL 0432 FWL	
43-047-53480	NBU 921-17D4BS	Sec 17	T09S	R21E	0982 FNL 0457 FWL	
43-047-53481	NBU 921-17D1CS	Sec 17	T09S	R21E	0976 FNL 0449 FWL	
43-047-53482	NBU 921-17D1BS	Sec 17	T09S	R21E	0970 FNL 0440 FWL	
43-047-53483	NBU 921-17F1BS	Sec 17	T09S	R21E	0634 FNL 1993 FWL	
43-047-53484	NBU 922-34G1CS	Sec 34	T09S	R22E	2030 FNL 1588 FWL	
43-047-53485	NBU 922-34G1BS	Sec 34	T09S	R22E	2029 FNL 1578 FWL	
43-047-53486	NBU 922-34F4BS	Sec 34	T09S	R22E	2032 FNL 1598 FWL	
43-047-53487	NBU 922-34C4BS	Sec 34	T09S	R22E	1991 FNL 0662 FWL	
43-047-53488	NBU 922-34E1CS	Sec 34	T09S	R22E	2001 FNL 0663 FWL	
43-047-53489	NBU 922-34E4BS	Sec 34	T09S	R22E	2021 FNL 0666 FWL	
43-047-53490	NBU 922-34E4CS	Sec 34	T09S	R22E	2040 FNL 0670 FWL	
43-047-53491	NBU 922-34L1AS	Sec 34	T09S	R22E	2030 FNL 0668 FWL	
43-047-53492	NBU 922-34B1CS	Sec 34	T09S	R22E	2023 FNL 1539 FWL	
43-047-53493	NBU 922-34B4BS	Sec 34	T09S	R22E	2024 FNL 1549 FWL	
43-047-53497	NBU 922-34L1CS	Sec 34	T09S	R22E	2071 FSL 1012 FWL	
43-047-53498	NBU 922-34B4CS	Sec 34	T09S	R22E	2027 FNL 1568 FWL	
43-047-53499	NBU 922-34K4BS	Sec 34	T09S	R22E	2035 FSL 0977 FWL	
43-047-53500	NBU 922-34F1BS	Sec 34	T09S	R22E	2021 FNL 1529 FWL	
43-047-53501	NBU 922-34J1BS	Sec 34	T09S	R22E	2057 FSL 0998 FWL	
43-047-53502	NBU 922-34J4BS	Sec 34	T09S	R22E	2028 FSL 0970 FWL	
43-047-53503	NBU 922-34K1CS	Sec 34	T09S	R22E	2064 FSL 1005 FWL	
43-047-53504	NBU 922-34K1BS	Sec 34	T09S	R22E	2078 FSL 1019 FWL	
43-047-53505	NBU 922-34F1CS	Sec 34	T09S	R22E	2026 FNL 1559 FWL	
43-047-53506	NBU 922-34F4CS	Sec 34	T09S	R22E	2085 FSL 1026 FWL	
43-047-53507	NBU 922-34J1CS	Sec 34	T09S	R22E	2050 FSL 0991 FWL	
43-047-53508	NBU 922-34J4CS	Sec 34	T09S	R22E	1203 FSL 0497 FWL	
43-047-53509	NBU 922-34K4CS	Sec 34	T09S	R22E	1213 FSL 0499 FWL	
43-047-53510	NBU 922-34L2DS	Sec 34	T09S	R22E	1232 FSL 0505 FWL	
43-047-53511	NBU 922-34L3DS	Sec 34	T09S	R22E	1222 FSL 0502 FWL	
43-047-53512	NBU 922-34M1BS	Sec 34	TO9S	R22E	1194 FSL 0493 FWL	
43-047-53513	NBU 922-34M4BS	Sec 34	T09S	R22E	0325 FSL 0787 FWL 0295 FSL 0747 FWL	
43-047-53514	NBU 922-34M4CS NBU 922-34N1CS	Sec 34	T09S T09S	R22E R22E	0319 FSL 0779 FWL	
43-047-53516	NBU 922-34N1CS	Sec 34	T09S	R22E	0307 FSL 07/9 FWL	
43-047-53517	NBU 922-34N4CS	Sec 34	T09S	R22E	0301 FSL 0755 FWL	
43-047-53518	NBU 922-34N4C3	Sec 34	T09S	R22E	0313 FSL 0771 FWL	
43-047-53519	NBU 921-17B4CS	Sec 34	T09S	R21E	1527 FNL 2258 FEL	
43-047-53520	NBU 921-17F1CS	Sec 17	T09S	R21E	1529 FNL 2288 FEL	
43-047-53521	NBU 921-17F4BS	Sec 17	T09S	R21E	1528 FNL 2278 FEL	
43-047-53522	NBU 921-17A4BS	Sec 17	T09S	R21E	2074 FNL 0557 FEL	
43-047-53523	NBU 921-17G4BS	Sec 17	T09S	R21E	1528 FNL 2268 FEL	
43-047-53524	NBU 921-17A4CS	Sec 17	T09S	R21E	2076 FNL 0547 FEL	
10 01, 00024	1100 721 1/7403	JCC 1/	1000	IVETL	20/01NL 034/1LL	

1 of 2 1/15/2013

API Well Number: 43047534970000

API	Well Name	Surface Location							
43-047-53525	NBU 921-17H1BS	Sec 17	T09S	R21E	2078 FNL 0538 FEL				
43-047-53526	NBU 921-17H1CS	Sec 17	T09S	R21E	2080 FNL 0528 FEL				
43-047-53527	NBU 921-17H4CS	Sec 17	T09S	R21E	2082 FNL 0518 FEL				

2 of 2 1/15/2013

API Well Number: 43047534970000

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/3/2013 API NO. ASSIGNED: 43047534970000

WELL NAME: NBU 922-34L1CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NWSW 34 090S 220E **Permit Tech Review:**

> SURFACE: 2071 FSL 1012 FWL **Engineering Review:**

> BOTTOM: 2107 FSL 1021 FWL Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99085 LONGITUDE: -109.43191 **UTM SURF EASTINGS: 633873.00** NORTHINGS: 4427919.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-0149077 PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal **COALBED METHANE: NO**

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

Potash R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit**

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting Fee Surface Agreement

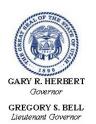
✓ Intent to Commingle R649-3-11. Directional Drill

Commingling Approved

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 922-34L1CS
API Well Number: 43047534970000
Lease Number: UTU-0149077
Surface Owner: FEDERAL

Approval Date: 1/30/2013

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
 - Requests to Change Plans (Form 9) due prior to implementation
 - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

RECEIVED UNITED STATES

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

Electronic Submissi For KERR MC Committed to AFMSS for p	プロロロ ひましん しゅんろし	od by the BLM Well Inform DNSHORE L, sent to the N NETTA MAGEE on 12/14/	ation System		
Additional Operator Remarks (see next page)			RECI	EIVED	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, r States any false, fictitious or fraudulent statements or representat	nake it a crime for any	OVAL ATTACHED person knowingly and willfully to thin its jurisdiction.	make to any department or ag	ency of the United	
Application approval does not warrant or certify the applicant ho operations thereon. Conditions of approval, if any, are attached.	lds legal or equitable tit	le to those rights in the subject lea	ase which would entitle the ap	plicant to conduct	
Lands & Mineral Resources	\/Et	RNAL FIELD OFFICE			
Title Assistant Field Manager	Office	Jerry Kenczk	a	JUN 0 4 2013	
Approved by (Signature)	Name (Printed/Typed)		•	Date N 0 4 2013	
REGULATORY ANALYST II					
(Electronic Submission)	GINA T BECKÉ	Ph: 720-929-6086		Date 12/04/2012	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Of 	em I ands the	Bond to cover the operation Item 20 above). Operator certification Such other site specific infoauthorized officer.	ns unless covered by an existing	be required by the	
The following, completed in accordance with the requirements of			his form		
		achments	60-90 DAYS		
21. Elevations (Show whether DF, KB, RT, GL, etc. 4989 GL	8969 TVD 22. Approximate dat 07/01/2012	e work will start	WYB000291 23. Estimated duration		
 Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 74 	19. Proposed Depth		20. BLM/BIA Bond No. on	file	
lease line, ft. (Also to nearest drig. unit line, if any) 785	600.00	Lease	17. Spacing Unit dedicated	to this well	
 14. Distance in miles and direction from nearest town or post APPROXIMATELY 50 MILES SOUTHEAST OF 15. Distance from proposed location to nearest property or 	Office* VERNAL, UTAH 16. No. of Acres in 1		12. County or Parish UINTAH	13. State UT	
At proposed prod. zone NWSW 2107FSL 1021FW	/L 39.991049 N Lat		Sec 34 T9S R22E N SME: BLM	ler SLB	
At surface NWSW 2071FSL 1012FW			11. Sec., T., R., M., or Blk	-	
1368 SOUTH 1200 EAST VERNAL, UT 84078 4. Location of Well (Report location clearly and in accord	3b. Phone No. (inches Ph: 720-929-608 Fx: 720-929-708	86 36	10. Field and Pool, or Expl NATURAL BUTTES		
KERR MCGEE OIL & GAS ONSHOR GAL GINA.	BECKER@ANADARKO.C		43-047-53	1 97.	
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ O 2. Name of Operator Contact	GINIA T DECKED	ngle Zone Multiple Zone	Lease Name and Well N NBU 922-34L1CS API Well No.	0.	
THE TOPO OF WORK.			7. If Unit or CA Agreemer 891008900A		
1a. Type of Work: ☐ DRILL ☐ REENTER	TO DRILL OR R	BLM	6. If Indian, Allottee or Tri		
APPLICATION FOR PERMIT		DEC 0 4 2012	5. Lease Serial No. UTU0149077		
BUREALIAND					

DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

HAR Abilin



UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No: API No:

Kerr McGee Oil & Gas Onshore, LP

NBU 922-34L1CS

43-047-53497

Location: Lease No: NWSW, Sec. 34, T9S, R22E

UTU-0149077 Agreement:

Natural Butte

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: NBU 922-34L1CS 5/16/2013

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
 work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
 mitigation may be necessary for the discovered paleontologic material before construction can
 continue.
- Mitigation measures can be found in Appendix B, Table B-2, of the GNB ROD (BLM 2012b) under the following sections of the table:
 - Air Quality
 - o Soils
 - o Vegetation: Sclerocactus wetlandicus
 - o Wildlife: Colorado River Fish
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established
- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an
 integrated pest management program is applicable, coordination has been undertaken with the
 state and local management program (if existing). A copy of the pest management plan will be
 submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.
- Paleontological monitoring by a BLM permitted paleontologist is required for Well Pads 922-33A, 922-33D, 922-33E, 922-33H, and 922-33N; Access Road for 922-33E during all ground disturbing activities (BLM 2012b; BLM 2013c).
- Construction and development activities will be prohibited at the Well pads 922-34E, 922-34F, and 922-34L locations from 5/15 to 6/30 (BLM 2008a).
- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to

Page 3 of 7 Well: NBU 922-34L1CS 5/16/2013

avoid damaging fences, gates, and cattle guards, including upgrading cattle guard gate widths and load-bearing requirements and fencing all open pits and cellars.

If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattle guard and gate installed per BLM guidance.

Page 4 of 7 Well: NBU 922-34L1CS 5/16/2013

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Cement for the 4.5 inch casing shall be brought up to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run from TD to TOC in the Production Casing.
- Variances shall be granted as requested in Section 9 of the Drilling Program of the SOP.
- Gamma Ray Log shall be run from TD to the Surface.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
 encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
 Field Office.

Page 5 of 7 Well: NBU 922-34L1CS 5/16/2013

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
 Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 7 Well: NBU 922-34L1CS 5/16/2013

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written communication
 and must be received in this office by not later than the fifth business day following the date on
 which the well is placed on production. The notification shall provide, as a minimum, the following
 informational items:
 - Operator name, address, and telephone number.
 - o Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - o Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs.

Page 7 of 7 Well: NBU 922-34L1CS 5/16/2013

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
 lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
 suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
 obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior approval
 of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
 approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
 of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 44951 API Well Number: 43047534970000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-34L1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047534970000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 17 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 34 Township: 09.0S Range: 22.0E Mer	ridian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE ☐ CHANGE TO PREVIOUS PLANS	☐ ALTER CASING ☐ CHANGE TUBING	CASING REPAIR CHANGE WELL NAME
1/30/2014	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN OPERATOR CHANGE	FRACTURE TREAT PLUG AND ABANDON	NEW CONSTRUCTION PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	☐ VENT OR FLARE ☐	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
Kerr-McGee Oil & Gan extension to this	COMPLETED OPERATIONS. Clearly show as Onshore, L. P. (Kerr-McGAPD for the maximum time with any questions and/or c	Gee) respectfully requests allowed. Please contact	Approved by the Utah Division of Oil, Gas and Mining
			Date: November 18, 2013
			Бу
NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMB 720 929 6582	BER TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 11/14/2013	

Sundry Number: 44951 API Well Number: 43047534970000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047534970000

API: 43047534970000 Well Name: NBU 922-34L1CS

Location: 2071 FSL 1012 FWL QTR NWSW SEC 34 TWNP 090S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 1/30/2013

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
• Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? (Yes (No
• Has the approved source of water for drilling changed? 🔘 Yes 🌘 No
• Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? Yes No
nature: Kay E. Kelly Date: 11/14/2013

Sig

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-34L1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047534970000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 7 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 34 Township: 09.0S Range: 22.0E Mer	idian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
1/8/2014	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:		SITA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
Spud well 01/08/20° X .250 wall co	COMPLETED OPERATIONS. Clearly show 14 @ 08:30. Drill 24" condunductor pipe, cement with 8 spud date and surface cas	uctor hole to 40', run 14" 1 sacks ready mix.	
NAME (PLEASE PRINT) Doreen Green	PHONE NUME		
SIGNATURE	435 781-9758	Regulatory Analyst II DATE	
N/A		1/10/2014	

Sundry Number: 52505 API Well Number: 43047534970000

		FORM 9			
ı	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MIR		3		DESIGNATION AND SERIAL NUMBER: 149077
SUNDR	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.	deep intal l	en existing wells below aterals. Use APPLICATION		r CA AGREEMENT NAME: AL BUTTES
1. TYPE OF WELL Gas Well					NAME and NUMBER: 22-34L1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NU 43047	JMBER: 534970000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021		NE NUMBER: '9 720 929-6		and POOL or WILDCAT: AL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL				COUNTY	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWSW Section:	IIP, RANGE, MERIDIAN: 34 Township: 09.0S Range: 22.0E Mer	idian:	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE N	ATURE OF NOTICE, REPOR	T, OR O	THER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
_	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
SUBSEQUENT REPORT	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
Date of Work Completion:	DEEPEN	☐ F	FRACTURE TREAT		NEW CONSTRUCTION
	OPERATOR CHANGE	∐ F	PLUG AND ABANDON	Ц	PLUG BACK
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	∐ F	RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
	REPERFORATE CURRENT FORMATION	∐ s	SIDETRACK TO REPAIR WELL	Ц	TEMPORARY ABANDON
✓ DRILLING REPORT	TUBING REPAIR	∐ v	/ENT OR FLARE	Ц	WATER DISPOSAL
Report Date: 6/24/2014	WATER SHUTOFF	∐ s	SI TA STATUS EXTENSION		APD EXTENSION
0/24/2014	WILDCAT WELL DETERMINATION		OTHER	ОТНЕ	ER:
12. DESCRIBE PROPOSED OR Drille	Oi	Iumes, etc. Accepted by the Utah Division of il, Gas and Mining RIPES, ORD ONLY			
NAME (PLEASE PRINT) Ila Beale	PHONE NUME 720 929-6408	BER	TITLE Staff Reg. Specialist		
SIGNATURE N/A			DATE 6/24/2014		

Sundry Number: 55427 API Well Number: 43047534970000

	STATE OF UTAH				FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI	-	3		DESIGNATION AND SERIAL NUMBER: 149077
SUNDR	WELLS	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.	y deep ontal l	en existing wells below aterals. Use APPLICATION		r CA AGREEMENT NAME: AL BUTTES
1. TYPE OF WELL Gas Well				1	NAME and NUMBER: 22-34L1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NI 43047	JMBER: 534970000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 802°		NE NUMBER: 9 720 929-6	1	and POOL or WILDCAT: AL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL				COUNTY	
QTR/QTR, SECTION, TOWNSH	tip, range, meridian: 34 Township: 09.0S Range: 22.0E Me	ridian:	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	T, OR C	THER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	FRACTURE TREAT		NEW CONSTRUCTION
·	OPERATOR CHANGE		PLUG AND ABANDON		PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	F	RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR		/ENT OR FLARE		WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	Π,	SI TA STATUS EXTENSION		APD EXTENSION
9/11/2014			OTHER	отн	
	WILDCAT WELL DETERMINATION				'
	completed operations. Clearly show eting the well. Well TD at 8	-	_	o FOI	Accepted by the Utah Division of il, Gas and Mining R RECORD ONLY September 12, 2014
NAME (PLEASE PRINT)	PHONE NUM	BER	TITLE		
Kay E. Kelly	720 929 6582		Regulatory Analyst		
SIGNATURE N/A			DATE 9/11/2014		

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MII			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077
SUNDR	Y NOTICES AND REPORTS	VELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.	y deepei contal lat	n existing wells below terals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 922-34L1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047534970000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021		E NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 1NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HP, RANGE, MERIDIAN: 34 Township: 09.0S Range: 22.0E Mer	eridian: S	3	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NAT	TURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE	☐ ALT	TER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	СНА	ANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	□ сог	MMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRA	ACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLU	JG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	REC	CLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDI	ETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VEN	NT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SIT	A STATUS EXTENSION	APD EXTENSION
12/17/2014	WILDCAT WELL DETERMINATION	□ отн	HER	OTHER:
l .	COMPLETED OPERATIONS. Clearly show 8,970'. WAITING ON COMPL BEGIN. THANK YOU.	-		epths, volumes, etc. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 17, 2014
NAME (PLEASE PRINT)	PHONE NUME		TITLE	
Kay E. Kelly	720 929 6582	_	Regulatory Analyst	
SIGNATURE N/A			DATE 12/17/2014	

Sundry Number: 59996 API Well Number: 43047534970000

STATE OF UTAH										
ı	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077						
SUNDR	RY NOTICES AND REPORTS	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:							
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES						
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 922-34L1CS						
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047534970000						
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		NE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 110ATUBRAL BUTTES						
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2071 FSL 1012 FWL				COUNTY: UINTAH						
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 34 Township: 09.0S Range: 22.0E Me	eridian: S	5	STATE: UTAH						
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NA	TURE OF NOTICE, REPOR	RT, OR OTHER DATA						
TYPE OF SUBMISSION			TYPE OF ACTION							
	ACIDIZE	☐ AL	TER CASING	CASING REPAIR						
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	Сн	IANGE TUBING	CHANGE WELL NAME						
Approximate date work will start.	CHANGE WELL STATUS	□ со	DMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE						
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FR	ACTURE TREAT	☐ NEW CONSTRUCTION						
1/20/2015	OPERATOR CHANGE	☐ PL	UG AND ABANDON	PLUG BACK						
SPUD REPORT	✓ PRODUCTION START OR RESUME		CLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION						
Date of Spud:	REPERFORATE CURRENT FORMATION		DETRACK TO REPAIR WELL	TEMPORARY ABANDON						
	TUBING REPAIR		NT OR FLARE	WATER DISPOSAL						
DRILLING REPORT Report Date:	WATER SHUTOFF		TA STATUS EXTENSION	APD EXTENSION						
Report Date.		□ 3 1								
	WILDCAT WELL DETERMINATION	от	HER	OTHER:						
The NBU 922-34L	COMPLETED OPERATIONS. Clearly show 1CS was placed on production production the completion. Producing from the completion of the completion	ction C)1/20/2015 after a	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 27, 2015						
NAME (D) = 105 = 100		4DED 1:	TITLE							
NAME (PLEASE PRINT) Doreen Green	PHONE NUM 435 781-9758		TITLE Regulatory Analyst II							
SIGNATURE N/A			DATE 1/20/2015							

RECEIVED: Jan. 20, 2015

FORM 3160-4 (March 2012)	UNITED STATES DEPARTMENT OF THE INTERIOR											FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014				
	W	FII CO					AGEMENT	ORT A	ND I	വ	5. I	ease Seri	al No. 149077			
1a. Type of Well Oil Well Gas Well Dry Other										6. I	f Indian, A	Allottee or	Tribe Na	ne		
b. Type of Comple	etion: 🚺 N	lew Well	Workover	Deepen	Plug	g Back	Diff. Resvr	.,								
		Other									7. t		A Agreeme	nt Name a	and No.	
Name of Operator	or			Contact	:		Doreen G	reen			8. I	ease Nan	ne and Wel	ll No.		
KERR-MCGE		AS ONSI	IORE LP	Email:	Doreen.0	Green@ana	darko.com	iccii					NBU	922-34	L1CS	
3. Address	P.O. Box 173779					3a.	Phone No. (incli		de)		9. A	API Well				
	Denver C	O 82017					720-929-60	00					7-53497			
Location of Wel	l (Report location	clearly and in	accordance	with Federal re	equirement.	s)*					10.		Pool, or E	•	у	
At Surface	1	WSW 20	71 FSL 10	12 FWL	Lat.	39.990	951 Lo	ong. 109	0.43196	5	11.		l Buttes R., M., on		d Survey o	r Area
At top prod. interval re	ported below N	NWSW 21	10 FSL 10	16 FWL								34 т		R 22	•	SLB
At total depth		JWSW 20	93 FSL 10	27 FW/I	Lat.	39.991	0100 La	ong. 109	13101	U8	12.	County	or Parish		13. Sta	ate
				27 I WL				nig. 105	7.43171	.00			NTAH			UT
14. Date Spudded		5. Date T.D	Reached 5/21/2014		16. Da	te Complet		✓	Ready t	o Proc		Elevation	s (DF, RK	B, RT, G	,	
1/8/20		0.070) m		0.010			20/20			5,007		RKB	
18. Total Depth:	MD TVD	8,970 8,967	19. PI	ig back T.D.:	MD TVD		8,918 8,915		20.	Depti	Bridge P	ug Set:	MD TVD			
21. Type Electric &			abmit copy of	each)			0,710		22. Wa	well	cored?	√	No	Yes	(Submit a	analysis)
TRIPLE COMBO, R	ADIAL CB GAM	MA RAY CO	L TEMP						Was	SDST	run?	√	No	Yes	(Submit 1	report)
									Dire	ectiona	d Survey?		No	✓ Yes	(Submit o	сору)
23. Casing and Lines Hole Size	Record (Report a Size/ Grade		in well) [#/ft.)	Top (MD)	Botto	m (MD)	Stage Cement	er Depth	No. of S	Sks. &	Type of	Slurry V	ol. (BBL)	Ceme	nt Top*	Amount Pulled
						. ,	Ü			Cemer						
24.000 12.250	14 STI 8.625 J-55		5.7 3.0	18		10 397				81 900		-			0	
7.875	4.5 I-80	_	6	18		965					,590			_	250	
24. Tubing Record	1		L			1										
Size	Depth Set (I		ker Depth (!	MD) S	Size	Dep	th Set (MD)	Packer	Depth (N	MD)	Si	ze	Depth	n Set (M	D) Pa	acker Depth (MD)
2.375 25. Producing Int		8,365				26. I	Perforation Rec	ord							ļ	
	rmation		Top	Во	ottom		Perforated 1	Interval			Size	N	lo. of Hol	les	Pe	erf. Status
A)	MESA VERD	Е	6,748	8	,970	6	5,886 To	8,8	368		0.410	_	189	_	Open	
B) C)																
D)																
27. Acid, Fracture		ement Sque	eze, etc.						1.00							
6,886	epth Interval - 8,868		PUMP 10.5	89 BBLS SI	ICKWAT	TER. 48 F	BBLS, HCL AC	Amount an	•••			30/50 M	ESH SA	ND		
				.,			,	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
20 December	ion Intomvol A	Duo	duction Moth				_ N/	ell Status						ı		
28. Product	ion- Interval A Test Date	Hours	duction Meth Test	Oil	From We		Water	Oil Gravit		Gas	Gas Well					
Produced	Test Bate	Tested	Producti		MC		BBL	Corr. API	-	Grav	ity					
1/20/2015	2/12/2015	24	\rightarrow	10)	1654	463									
Choke Size	Tbg. Press Flwg. SI	Csg. Press.	24 Hr. R	ate Oil BBL	Gas MC		Water BBL	Gas/Oil Ratio								
20/64	1015	1427		10		1654	463									
	ion- Interval B	1427	\rightarrow	10		1057	703			1						
Date First	Test Date	Hours	Test	Oil	Gas		Water	Oil Gravit		Gas						
Produced		Tested	Producti	on BBL	MC	F	BBL	Corr. API	l	Grav	ıty					
			\rightarrow							<u> </u>						
Choke Size	Tbg. Press Flwg. SI	Csg. Press.	24 Hr. R	ate Oil BBL	Gas MC		Water BBL	Gas/Oil Ratio								
]															

Sundry Number: 60902 API Well Number: 43047534970000 Production- Interval C Date First Oil Gravity Test Date Hours Test Oil Gas Water Gas BBL MCF BBL Gravity Produced Tested Production Corr. API Choke 24 Hr. Rate Tbg. Press Csg. Oil Gas Water Gas/Oil BBL MCF BBL Size Flwg. SI Press. Ratio 28c. Production- Interval D Date First Test Date Hours Γest Water Oil Gravity Produced Production BBL MCF BBL Corr. API Choke Tbg. Press Csg. 24 Hr. Rate Oil Gas Water Gas/Oil Flwg. SI BBL Ratio 29. Disposition of Gas (Sold, used for fuel, vented, etc.) 30. Summary of Porous Zones (include Aquifers): 31. Formation (Log) Markers: Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries. Top Formation Descriptions, Contents, Etc. Top Bottom Name Meas. Depth GREEN RIVER 1130 BIRD'S NEST 1482 MAHOGANY 1970 WASATCH 4378 MESA VERDE 6748 32. Additional remarks (include plugging procedure): 33. Indicate which items have been attached by placing a check in the appropriate boxes: Electrical/Mechanical Logs (1 full set req'd) Geologic Report DST Report Directional Survey Other: Sundry Notice for plugging and cement verification Core Analysis 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)* Name (please print) Doreen Green Regulatory Analyst II Signature 2/13/2015

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3) (Forms 3160-4, page 2)

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency

INSTRUCTIONS

General: This form is designed for submitting a complet and correct well completion/recompletion report and log on all types of wells on Federal and indian lease to a federal agency, pursuant to applicable fedral laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal office.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, and all types electric), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal laws and regulations. All attachments should be listed on this form, see item 33.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

ITEM 17: Indicate which reported elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

ITEM 23: Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bond log (CBL), or temperature survey (TS).

NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to evaluate the actual operations performed in the drilling, completing and testing of a well on a Federal or Indian lease.

ROUTINE USES: : (1) Evaluate the equipment and procedures used during the drilling and completing/ recompleting of a well. (2) The review of geologic zones and formations encountered during drilling. (3) Analyse future applications to drill in light of data obtained and methods used. (4)(5) Information from record and or the record will be transferred to the appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this report and disclosure of the information is mandatory once a well drilled on a Federal or Indian lease is completed/ recompleted.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling and completing/recompleting wells on Federal and Indian oil and gas leases.

This information will be used to analyse operations and to compare equipment and procedures actually used with those proposed and approved. Response to this request is mandatory only if the operator elects to initiate drilling and completing/recompleting operations on an oil and gas leave

BLM would like you to know that you do not have to respond to this or any other Federal agency -sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

(Forms 3160-4, page 3)

Well: NBU 922-34L1CS YELLOW Spud date: 2/24/2014 Project: UTAH-UINTAH Site: NBU 922-34L PAD Rig name no.: SST 57/57, CAPSTAR 310/310 Event: DRILLING Start date: 2/23/2014 End date: 5/23/2014 Active datum: RKB @5,007.00usft (above Mean Sea UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0	US ROCKIES REGION Operation Summary Report											
Site: NBU 922-34L PAD					Opera	tion S	umma					
Start date: 2/23/2014 Start date: 2/23/2014 End date: 5/23/2014 End date: 5/23/2												
Name	-			Site: NBL	J 922-34L	PAD			Rig name no.: SST 57/57, CAPSTAR 310/310			
Date Start-End Duration Phase Code Sub P/U MD from Question												
223/2014	Active datum: R Level)	KB @5,007.00usft (above Mean Se	ea	UWI: NV	N/SW/0/9	9/S/22/E/3	34/0/0/26/PM/S/2	071/W/0/1012/0/0			
RIG FROM NBU 922-34J1CS TO THE NBU 922-34J1CS WELL OF 8. HOWCROFT FIELD SERVICES HAD 2 TRUCKS 1 DE NAMPER 1 PUSHER/SAFETY MAN SKID RIC PIG 19 PUSHER/SAFETY MESTING PLAD RUBBER PIG 10 PUSH / INSTAL ROTATING HEAD RUBBER PIG 10 PUSH / INSTAL PIG 19 PUSH / IN	Date			Phase	Code		P/U	_	Operation			
2:00	2/23/2014	22:30 - 0:00	1.50	MIRU	01	С	Р	58	RIG FROM NBU 922-34J1CS TO THE NBU 922-34L1CS, WELL 2 OF 8. HOWCROFT FIELD SERVICES HAD 2 TRUCKS 1 SWAMPER 1			
4:30	2/24/2014	0:00 - 2:00	2.00	MIRU	01	С	Р	58	SKID RIG / RIG UP			
Signature Sign		2:00 - 4:30	2.50	MIRU	01	В	Р	58	WELD ON CONDUCTOR / RIG UP FLOW LINE			
6:00 - 6:30		4:30 - 5:30	1.00	MIRU	01	В	Р	58				
6:30 - 8:00 1.50 DRLSUR 02 B P 58 DRILL 12 1/4 SURFACE HOLE F/ 49' TO 200', 151' @ 151 FPH WOB = 8 TO 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ONOFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 30 / SO = 28 / ROT = 28 PEAK ON LINE ARCHER OFF 8:00 - 9:30 1.50 DRLSUR 06 A P 209 TRIP OUT / CHANGE BIT / PICK UP EIRECTIONAL BHA AND TOOLS / TRIP IN 9:30 - 11:30 2.00 DRLSUR 02 B P 209 DRILL 11" SURFACE HOLE F/ 200' TO 390', 190' @ 95.5' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 52 / SO = 45 / ROT = 49 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 22" = 11.52% 1.09' ABOVE 8. 35' RIGHT OF THE LINE		0.00	0.50	MIRU	23	В	Р	58	PRE SPUD SAFETY MEETING			
151 @ 151 FPH W08 = 8 T0 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 30 / SO = 28 / ROT = 28 PEAK ON LINE ARCHER OFF 8:00 - 9:30		0.00							ANADARKO SAFETY MEETING			
AND TOOLS / TRIP IN 9:30 - 11:30									151' @ 151 FPH WOB = 8 TO 12K ROTORY RPM = 65 MUD MOTOR RPM = 111 TOTAL = 166 PUMPING 650 GPM @ 200 SPM STAND PIPE PRESSURE ON/OFF = 800/600 TORQUE ON/OFF = 2000/740 PU = 30 / SO = 28 / ROT = 28 PEAK ON LINE ARCHER OFF			
95.5' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 52 / SO = 45 / ROT = 49 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 22' = 11.52% 1.09' ABOVE & .35' RIGHT OF THE LINE		0.00	1.50	DRLSUR	06	Α	Р	209				
INO FIOLE 1990E9		9:30 - 11:30	2.00	DRLSUR	02	В	P	209	95.5' FPH WOB = 15 TO 19K ROTORY RPM = 60 / MUD MOTOR RPM = 111 / TOTAL = 171 PUMPING 533 GPM @ 174 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,560/1450 PU = 52 / SO = 45 / ROT = 49 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 22' = 11.52% 1.09' ABOVE & .35' RIGHT OF THE LINE			
11:30 - 12:00 0.50 DRLSUR 07 C P 399 CHANGE ROTATING HEAD RUBBER		11:30 - 12:00	0.50	DRI SUR	07	С	Р	300				

<u> Sundry Number: 60902 API Well Number: 43047534970000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 922-34L1CS YELLOW Spud date: 2/24/2014 Project: UTAH-UINTAH Site: NBU 922-34L PAD Rig name no.: SST 57/57, CAPSTAR 310/310 **Event: DRILLING** End date: 5/23/2014 Start date: 2/23/2014 UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0 Active datum: RKB @5,007.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 12:00 - 17:30 5.50 DRLSUR 02 Ρ 399 В DRILL 11" SURFACE HOLE F/ 391' TO 1,110', 718' @ 119.7' FPH WOB = 18 TO 23K ROTORY RPM = 60 / MUD MOTOR RPM = 68 / TOTAL = 128 PUMPING 533 GPM @ 174 SPM` STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,900/2000 PU = 60 / SO = 55 / ROT = 58 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 166' = 22.13% 7.6' ABOVE & 1.60 LEFT OF THE LINE NO HOLE ISSUES 17:30 - 18:00 0.50 DRLSUR 1119 **RIG SERVICE** 18:00 - 0:00 Ρ 6.00 **DRLSUR** 02 В 1119 DRILL 11" SURFACE HOLE F/ 1,110' TO 1,768', 658' @ 109.7' FPH WOB = 18 TO 23K ROTORY RPM = 60 / MUD MOTOR RPM = 68 / TOTAL PUMPING 400 GPM @ 124 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,900/2000 PU = 74 / SO = 63 / ROT = 57 PEAK ON LINE ARCHER OFF LINE **MUD WT 8.4** SLID 47' = 7.47% 7.0' ABOVE & 4.12 LEFT OF THE LINE NO HOLE ISSUES 2/25/2014 0:00 - 7:30 7.50 DRLSUR 02 В 1777 DRILL 11" SURFACE HOLE F/ 1,768' TO 2,420', 652' @ 86.9' FPH WOB = 18 TO 23K ROTORY RPM = 60 / MUD MOTOR RPM = 68 / TOTAL PUMPING 400 GPM @ 124 SPM STAND PIPE PRESSURE ON/OFF = 900/650 TORQUE ON/OFF = 2,900/2000 PU = 82 / SO = 75 / ROT = 78 PEAK ON LINE ARCHER OFF LINE MUD WT 8.4 SLID 71' = 14.03% 6.69' ABOVE & .71' LEFT OF THE LINE NO HOLE ISSUES 7:30 - 9:00 1.50 **DRLSUR** Ρ 2429 SURVEY / CIRCULATE AND CLEAN THE HOLE 05 Α 9:00 - 11:30 D Ρ 2429 LAY DOWN DRILL PIPE / BHA / DIRECTIONAL TOOLS 2.50 DRLSUR 06 11:30 - 12:30 1.00 **DRLSUR** 12 Α Ρ 2429 RIG DOWN CUSHION SUB / RIG UP CASING SPEAR

2/13/2015 1:40:45PM 2

Sundry	Numb	er: 6	0902	APT We	11 N	umbe	r: 4	30475349	970000
					US	S ROCK	KIES RE	GION	
				(Opera	tion S	umma	ry Report	
Well: NBU 922-34	4L1CS YEL	LOW						Spud date: 2/2	4/2014
Project: UTAH-UI	NTAH			Site: NBU	922-34L	PAD			Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLING	i			Start date	: 2/23/201	14			End date: 5/23/2014
Active datum: RK Level)	B @5,007.	00usft (abo	ve Mean Se	ea	UWI: NV	V/SW/0/9/	/S/22/E/3	4/0/0/26/PM/S/20	071/W/0/1012/0/0
Date	Tin Start	-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	12:30 -	14:30	2.00	CSGSUR	12	С	Р	2429	PREJOB SAFETY WITH RIG CREW. RAN 54 JTS OF 8 5/8", 28#, J-55, LT&C CASING WITH CTE FLOAT GUIDE SHOE AND BAFFLE PLATE LOCATED 1 JOINT ABOVE THE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE THE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 1,991'. LANDED CASING SHOE AT 2,388'. BAFFLE PLATE @ 2,341'.
		15:00	0.50	CSGSUR	05	D	Р	2429	FILL PIPE
	15:00 -	16:30	1.50	CSGSUR	12	E	P	2429	PREJOB SAFETY MEETING WITH PRO PETRO CEMENTERS & RIG CREW. TESTED LINES TO 2500 PSI PUMPED 120 BBLS FRESH WATER CLEARING SHOE RETURNS TO SURFACE MIXED AND PUMPED 20 BBL GELLED WATER FLUSH AHEAD OF CEMENT MIXED AND PUMPED 300 SX OF PREMIUM LEAD CEMENT WITH 2% CACL2 & 1/4 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. DROP PLUG ON FLY. DISPLACE CEMENT WIITH 146 BBL FRESH WATER. RETURNS THROUGH OUT DISPLACEMENT. FINAL LIFT OF 145 PSI @ 3 BBL/MINUTE. BUMP PLUG WITH 185 PSI. HELD 440 PSI FOR 5 MINUTES. CHECK FLOAT. FLOAT HELD. TOP JOB # 1: PUMP CEMENT DOWN 1" PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 30.7 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. WAIT ON CEMENT 2 HRS TOP JOB # 2: PUMP CEMENT DOWN 1" PIPE WITH 175 SX PREMIUM CEMENT WITH 4% CACL2, 2% GR-3, & 1/4 LB/SX FLOCELE. 35.6 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX RELEASE RIG 02/25/2014 @ 16:30 RELEASE CEMENTERS
5/18/2014	18:00 -	19:00	1.00	MIRU3	01	С	Р	2429	RIG DOWN - SKID RIG - RIG UP
	19:00 -	20:00	1.00	PRPSPD	14	Α	Р	2429	NIPPLE UP BOP'S - CHOKE & KILL LINES / ROTATING HEAD & FLOW LINE
	20:00 -		3.00	PRPSPD	15	Α	Р	2429	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES,TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN
	23:00 -	23:30	0.50	PRPSPD	14	В	Р	2429	INSTALL WEAR BUSHING

				U	S ROC	KIES RE	GION	
				Opera	tion S	Summa	ry Report	
ell: NBU 922-	34L1CS YELLOW						Spud date: 2/2	24/2014
oject: UTAH-L	JINTAH		Site: NBL	J 922-34L	. PAD			Rig name no.: SST 57/57, CAPSTAR 310/310
ent: DRILLIN	G		Start date	e: 2/23/20	14			End date: 5/23/2014
tive datum: R vel)	RKB @5,007.00usft (a	above Mean S	ea	UWI: N\	N/SW/0/9	9/S/22/E/34	1/0/0/26/PM/S/2	071/W/0/1012/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	23:30 - 0:00	0.50	PRPSPD	06	J	Р	2429	PICK UP SCIENTIFIC 6 1/2", 1.5 BEND, HR, 7/8 LOBE 3.3 STAGE 0.16 RPG MUD MOTOR, (SER #6320-NBR) - MAKE UP SECURITY MM65M PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), SER #123679 - INSTALL MWD TOOL, ORIENT & SCRIBE
5/19/2014	0:00 - 0:30	0.50	PRPSPD	06	J	Р	2429	PICK UP SCIENTIFIC 6 1/2", 1.5 BEND, HR, 7/8 LOBE 3.3 STAGE 0.16 RPG MUD MOTOR, (SER #6320-NBR) - MAKE UP SECURITY MM65M PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), SER #123679 - INSTALL MWD TOOL, ORIENT & SCRIBE
	0:30 - 1:30	1.00	PRPSPD	06	Α	Р	2429	TRIP IN HOLE TO TOC AT 2222' / INSTALL ROTATING RUBBER
	1:30 - 3:00	1.50	DRLPRC	02	F	Р	2429	DRILL CEMENT & FLOAT EQUIPMENT, CLEAN OUT TO 2429'
	3:00 - 13:30	10.50	DRLPRV	02	В	P	2429	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 2,429' TO / 4438' = 2009' @ 191.3' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 6-12K STAND PIPE PRESSURE ON BOTTOM = 1600 STAND PIPE PRESSURE OFF BOTTOM = 1,200 STRING WEIGHT UP/DOWN/ROTATING = 120K / 90K 110K DRAG = 10K HOLE IN GOOD CONDITION SLIDE 26% OF TIME AND 9% OF FOOTAGE BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

13:30 - 14:00

0.50

DRLPRV

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4438

LUBRICATE RIG

				U	S ROCI	KIES RE	EGION		
				Opera	tion S	umma	ry Report		
/ell: NBU 922-34	4L1CS YELLOW						Spud date: 2/2	24/2014	
roject: UTAH-UI	NTAH		Site: NBL	922-34L	. PAD			Rig name no.: SST 57/57, CAPSTAR 310/310	
vent: DRILLING	}		Start date	: 2/23/20	114			End date: 5/23/2014	
	(B @5,007.00usft (a	bove Mean Se	ea	UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0					
evel) Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
	14:00 - 0:00	10.00	DRLPRV	02	В	P	4438	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 4438' TO / 5899' = 1461' @ 146.1' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 6-12K STAND PIPE PRESSURE ON BOTTOM = 2150 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 190K / 130K / 158K DRAG = 32K HOLE IN GOOD CONDITION SLIDE 4% OF TIME AND 3% OF FOOTAGE BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 27 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB	
5/20/2014	0:00 - 8:00	8.00	DRLPRV	02	В	P	5899	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 5899' TO / 6612' = 713' @ 89.1' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 6-12K STAND PIPE PRESSURE ON BOTTOM = 2150 STAND PIPE PRESSURE OFF BOTTOM = 1800 STRING WEIGHT UP/DOWN/ROTATING = 210K / 135K / 165K DRAG = 45K HOLE IN GOOD CONDITION SLIDE 5% OF TIME AND 3% OF FOOTAGE BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING	

HIGH VISCOSITY SWEEPS WITH CALCARB

				U	SROCI	KIES RE	GION	
				Opera	tion S	umma	ry Report	
Vell: NBU 922-3	34L1CS YELLOW						Spud date: 2/2	24/2014
Project: UTAH-L	JINTAH		Site: NBL	J 922-34L	. PAD			Rig name no.: SST 57/57, CAPSTAR 310/310
vent: DRILLIN	G		Start date	e: 2/23/20	14			End date: 5/23/2014
ctive datum: R evel)	KB @5,007.00usft (al	oove Mean S	ea	UWI: N\	W/SW/0/9	/S/22/E/3	4/0/0/26/PM/S/2	071/W/0/1012/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:00 - 15:30	7.50	DRLPRV	02	В	P	6612	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 6612' TO / 7189' = 577' @ 76.9' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 6-12K STAND PIPE PRESSURE ON BOTTOM = 2100 STAND PIPE PRESSURE OFF BOTTOM = 1850 STRING WEIGHT UP/DOWN/ROTATING = 235K / 150k / 185K DRAG = 50K HOLE IN GOOD CONDITION SLIDE 23% OF TIME AND 10% OF FOOTAGE BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	15:30 - 16:00	0.50	DRLPRV	07	Α	Р	7189	LUBRICATE RIG
	16:00 - 0:00	8.00	DRLPRV	02	В	P	7189	DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7189' TO / 7875' = 686' @ 85.8' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 8-14K STAND PIPE PRESSURE ON BOTTOM = 2200 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 240K / 155K / 190K DRAG = 50K HOLE IN GOOD CONDITION SLIDE 5% OF TIME AND 3% OF FOOTAGE BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.2 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING

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HIGH VISCOSITY SWEEPS WITH CALCARB

<u> Sundry Number: 60902 API Well Number: 43047534970000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 922-34L1CS YELLOW Spud date: 2/24/2014 Project: UTAH-UINTAH Site: NBU 922-34L PAD Rig name no.: SST 57/57, CAPSTAR 310/310 **Event: DRILLING** End date: 5/23/2014 Start date: 2/23/2014 UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0 Active datum: RKB @5,007.00usft (above Mean Sea Date P/U Time Duration Phase Code MD from Operation Sub Start-End (hr) Code (usft) 5/21/2014 0:00 - 8:00 8.00 **DRLPRV** 02 Ρ 7875 В DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 7875' TO / 8446' = 571' @ 71.4' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 2 PUMP @ 60/60 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 8-14K STAND PIPE PRESSURE ON BOTTOM = 2200 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 240K / 155K / 190K DRAG = 50K HOLE IN GOOD CONDITION SLIDE 5% OF TIME AND 3% OF FOOTAGE **BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING** MUD WEIGHT = 9.2 PPG VISCOSITY = 31 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB START DISPLACING WITH 12# MUD @ 8400' 8:00 - 10:30 2.50 **DRLPRV** 8446 *** TOOK GAS KICK WHILE DISPLACING WITH 12# MUD - BLEW RETURN LINE FROM GAS BUSTER OFF - SHUT IN WELL AND REPAIR - HAD 400 PSI SHUT IN CASING PRESSURE & 600 PSI SHUT IN DRILL PIPE PRESSURE - CIRCULATE OUT @ 40 SPM HOLDING 700 PSI ON DRILL PIPE WHILE BRINGING MUD WT FROM 11# TO 11.9# HAD 40-60' FLARE WHILE CIRCULATING OUT GAS 10:30 - 16:30 6.00 DRLPRV 8446 DIRECTIONAL DRILL 7.7/8 PRODUCTION HOLF FROM / 8,446' TO / 8,710' = 264' @ 44' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85 TOP DRIVE RPM = 50-70. TOTAL RPM = 123-143 FT/LBS TORQUE = 8-14K STAND PIPE PRESSURE ON BOTTOM = 2200 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 240K / 155K / 190K DRAG = 50K HOLE IN GOOD CONDITION SLIDE 0% OF TIME AND 0% OF FOOTAGE **BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING** MUD WEIGHT = 11.9 PPG VISCOSITY = 36 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB 16:30 - 16:30 0.00 **DRLPRV** 8710 RIG SERVICE. SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.

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<u> Sundry Number: 60902 API Well Number: 43047534970000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 922-34L1CS YELLOW Spud date: 2/24/2014 Project: UTAH-UINTAH Site: NBU 922-34L PAD Rig name no.: SST 57/57, CAPSTAR 310/310 **Event: DRILLING** End date: 5/23/2014 Start date: 2/23/2014 UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0 Active datum: RKB @5,007.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 16:30 - 22:30 6.00 **DRLPRV** 02 Ρ 8710 В DIRECTIONAL DRILL 7 7/8 PRODUCTION HOLE FROM / 8,710' TO / 8,970' = 260' @ 43' PER HOUR WEIGHT ON BIT = 18-24K STROKES PER MINUTE 1 PUMP @ 105 GALLONS PER MINUTE = 590 MUD MOTOR RPM = 85, TOP DRIVE RPM = 50-70, TOTAL RPM = 123-143 FT/LBS TORQUE = 8-14K STAND PIPE PRESSURE ON BOTTOM = 2200 STAND PIPE PRESSURE OFF BOTTOM = 1900 STRING WEIGHT UP/DOWN/ROTATING = 260K / 180K / 220K DRAG = 40K HOLE IN GOOD CONDITION SLIDE 0% OF TIME AND 0% OF FOOTAGE **BOS DE-WATERING - RUNNING CENTRIFUGE - RUNNING DE-SANDER - RUNNING** MUD WEIGHT = 11.9 PPG VISCOSITY = 36 SECONDS DRILLING WITH FLOWZAN MUD SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB 22:30 - 0:00 1.50 **DRLPRV** 05 С 8970 CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 12.0 PPG VISCOSITY=36, MUD OUT 12.0 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, CIRCULATE WITH NO GAINS AND NO LOSSES PUMPED 40 BBL CAL CARB SWEEPS WITH WALL NUT AND, MULTI SEAL, NO FLOW ON FLOW CHECKS 5/22/2014 0:00 - 1:00 DRLPRV 8970 1.00 15 STAND WIPER TRIP BACK TO 7,600', NO TIGHT HOLE HOLE TOOK PROPER FILL WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS 1:00 - 3:00 2.00 **DRLPRV** 05 С 8970 CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 12.0 PPG VISCOSITY=36, MUD OUT 12.0 PPG VISCOSITY=36. MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 14.2# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS 3:00 - 9:00 6.00 **DRLPRV** В 8970 06 PUMP 40 BBL DRY JOB, BLOW DOWN TOP DRIVE, TRIP OUT OF HOLE FOR LOGS, TIGHT HOLE @ 6200', 4600', WASHED AND REAMED THROUGH TIGHT HOLE HOLE TOOK PROPER FILL WITH NO GAINS NO LOSSES NO FLOW ON FLOW CHECKS 9:00 - 10:30 1.50 **EVALPR** 11 D 8970 HOLD SAFETY MEETING WITH WEATHERFORD LOGGING PICK UP SHUTTLE LOGGING TOOLS MAKE UP 3 1/2 DRILL PIPE AND CROSS OVERS **INSTALL SHUTTLE LOG**

2/13/2015 1:40:45PM 8

<u> Sundry Number: 60902 API Well Number: 43047534970000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 922-34L1CS YELLOW Spud date: 2/24/2014 Project: UTAH-UINTAH Site: NBU 922-34L PAD Rig name no.: SST 57/57, CAPSTAR 310/310 **Event: DRILLING** End date: 5/23/2014 Start date: 2/23/2014 UWI: NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0 Active datum: RKB @5,007.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 10:30 - 17:00 6.50 **EVALPR** 11 Ρ 8970 D TRIP IN HOLE WITH LOGGING TOOLS **BREAK CIRCULATION EVERY 15 STANDS** WASH DOWN LAST 3,000' TO BOTTOM 17:00 - 18:00 1.00 **EVALPR** 11 D Р 8970 DEPLOY DART & CIRCULATE BOTTOMS UP 18:00 - 0:00 6.00 **EVALPR** D Ρ 8970 LOG UP FROM LOGGERS DEPTH OF 8,960' 11 0:00 - 2:00 5/23/2014 2 00 **EVALPR** D Р 8970 11 LOGG UP FROM LOGGERS DEPTH OF 8,960' RIG DOWN SHUTTLE LOGGS 2:00 - 2:30 0.50 **EVALPR** 14 В Ρ 8970 **PULL WEAR BUSHING** 2:30 CSGPRO - 4:00 8970 1.50 Р 12 Α HOLD SAFETY MEETING / RIG UP WYOMING CASING SERVICE CASING EQUIPMENT 4:00 - 10:00 6.00 **CSGPRO** 12 С Ρ 8970 WYOMING CASING SERVICE, (INSPECT FLOAT **EQUIPMENT**) RIG UP TORQUE TURN, PERFORM DUMP TEST. MAKE UP 4.5" K-55 LTC DRILLING & COMPLETION TECH. FLOAT SHOE ON SHOE JOINT WITH THREAD MAKE UP 4.5" K-55 FLOAT COLLAR WITH THREAD LOCK ON TOP OF SHOE JOINT. RUN CENTRALIZERS ON FIRST 3 JOINTS AND **EVERY THIRD JOINT FOR TOTAL OF 15** CENTRALIZERS. BREAK CIRCULATION @ 50', 2,000', 5,000', 7,000'. NO PROBLEMS WITH FLOAT SHOE OR COLLAR. RUN A TOTAL OF 89 JOINTS OF 4 1/2", 11.6#. I-80, LT&C CASING + 2 MARKER JOINT MAKE UP DQX CROSS OVER JOINT AND, RUN A TOTAL OF 113 JOINTS OF 4 1/2", 11.6#, I-80/ DQX, CASING, + 1 CROSSOVER + 1 PUP JOINT RUN A TOTAL OF 206 JOINTS OF CASING TO BOTTOM, HAD SOME TROUBLE GETTING SOME DQX TO SHOULDER HAD TO BACK THEM OUT ONCE OR TWICE TO GET THEME TO SHOULDER, AND SHOULDER'S WERE HIGH BUT STILL IN SPEC. FILL PIPE EVERY 2,000' DURRING CASING RUN SET FLOAT SHOE @ 8,964.74', SET TOP FLOAT COLLAR @ 8,917.52', SET TOP OF MESAVERDE MARKER JOINT @ 6,731.64' 10:00 - 13:00 8970 3.00 **CSGPRO** 05 D Р CIRCULATE HOLE CLEAN

2/13/2015 1:40:45PM 9

RECEIVED: Feb. 13, 2015

HOLD SAFETY MEETING, RIG UP BAKER HUGHES

CEMENTING EQUIPMENT

Sundry	v Number:	60902	APT We	ע ווי	Iumbe	r: 4	13047534	970000
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				Opera	tion S	Summa	ary Report	
Well: NBU 922-	34L1CS YELLOW						Spud date: 2/2	24/2014
Project: UTAH-L	UINTAH		Site: NBU	922-34L	PAD			Rig name no.: SST 57/57, CAPSTAR 310/310
Event: DRILLIN	IG		Start date	: 2/23/20	14			End date: 5/23/2014
Active datum: R Level)	RKB @5,007.00usft (ab	oove Mean S	ea	UWI: N\	N/SW/0/9	9/S/22/E/	34/0/0/26/PM/S/2	071/W/0/1012/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	13:00 - 16:00	3.00	CSGPRO	12	E	P	8970	HOLD SAFETY MEETING CEMENT WITH BAKER HUGHES TEST LINES TO 5,000 PSI, DROP BOTTOM PLUG, PUMP 25 BBLS H20 8.3 PPG SPACER, USED 25% EXCESS CEMENT ON LEAD CEMENT MIX & PUMP 178.23 BBLS LEAD CEMENT 505 SACKS WITH CLASS G CEMENT, WITH PLII +6%GELL +5#skKS +.4%FL52 +.2%SMS +.4% R-3+5#/skSF + 1/4#skCF @ 12.5 PPG WITH 1.98 YIELD, USED 25% EXCESS CEMENT ON TAIL CEMENT MIX & PUMP 259.23 BBLS TAIL CEMENT 1,085 SACKS, WITH CLASS G CEMENT, WITH 50/50 poz+2%gell+0.55% R-3 + 10%salt+5#/bind S.F. +.75%SMS @ 14.3 PPG WITH 1.34 YIELD, WASH UP LINES & DROP THE TOP PLUG DISPLACE WITH 138.6 BBLS H2O @ 8.3 PPG, WITH 6 GALLONS CLAY CARE, CLAY TREAT-2C FINAL LIFT PRESSURE PRIOR TO BUMPING PLUG 2,588 PSI BUMP PLUG WITH 3,230 PSI GOOD RETURNS THROUGHOUT JOB - 5 BBLS SPACER BACK TO SURFACE RIG DOWN CEMENTING EQUIPMENT TOP OF LEAD CEMENT@ 400', TOP OF TAIL CEMENT@ 3800'
	16:00 - 17:00	1.00	CSGPRO	12	С	Р	8970	LAY DOWN LANDING JOINT INSTALL & TEST PACK OFF 5000 PSI, 10 MINUTES
	17:00 - 18:00	1.00	RDMO	14	Α	Р	8970	NIPPLE DOWN BOP'S CLEAN MUD TANKS

RECEIVED: Feb. 13, 2015

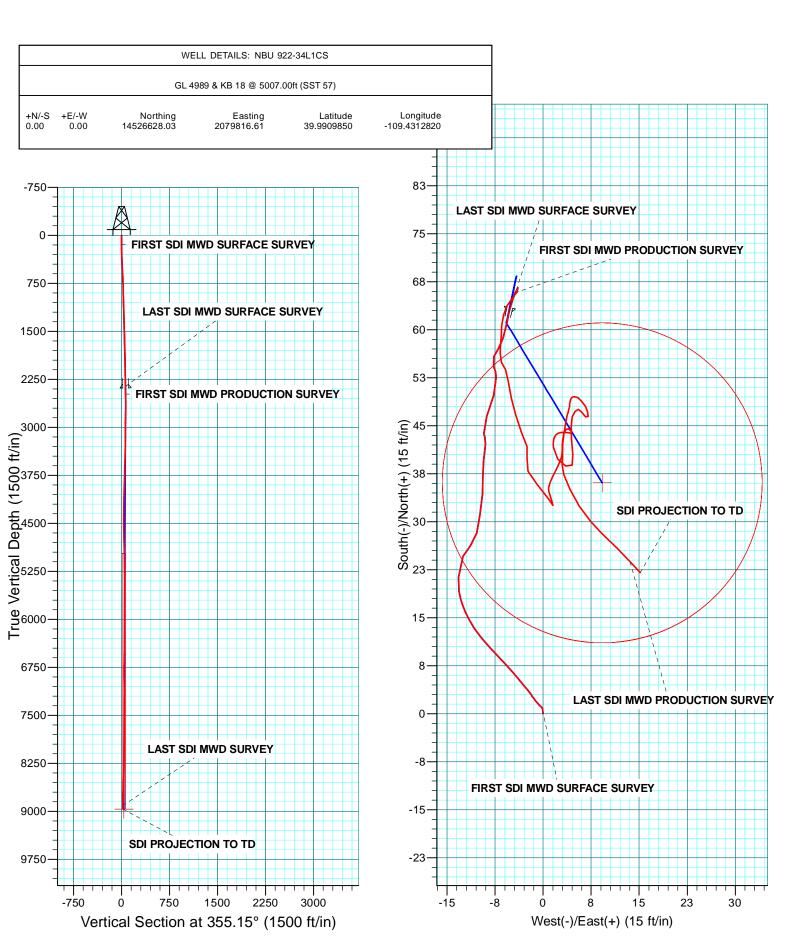
RELEASE RIG @ 05/23/2014 18:00 HOURS

Sundry Number: 60902 API Well Number: 43047534970000 Project: UTAH - UTM (feet), NAD27, Zone 12N Scientific Drilling

Site: NBU 922-34L PAD Well: NBU 922-34L1CS



Wellbore: OH





US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 922-34L PAD NBU 922-34L1CS

OH

Design: OH

Standard Survey Report

28 May, 2014





Scientific Drilling

Survey Report

TVD Reference:

MD Reference:



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 922-34L PAD

 Well:
 NBU 922-34L1CS

Wellbore: OH
Design: OH

Geo Datum: Map Zone: Local Co-ordinate Reference:

Well NBU 922-34L1CS

GL 4989 & KB 18 @ 5007.00ft (SST 57) GL 4989 & KB 18 @ 5007.00ft (SST 57)

North Reference: True

Survey Calculation Method: Minimum Curvature

Database: Denver Sales Office

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

System Datum: Mean Sea Level

Zone 12N (114 W to 108 W)

NBU 922-34L PAD, SECTION 34 T9S R22E Site Northing: 14,526,606.18 usft Site Position: Latitude: 39.9909260 From: Lat/Long Easting: 2,079,795.97 usft Longitude: -109.4313570 0.00 ft 1.01 ° **Position Uncertainty:** Slot Radius: 13.200 in **Grid Convergence:**

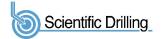
Well	NBU 922-34L	1CS, 2017 FSL 10)12 FWL			
Well Position	+N/-S	0.00 ft	Northing:	14,526,628.03 usft	Latitude:	39.9909850
	+E/-W	0.00 ft	Easting:	2,079,816.61 usft	Longitude:	-109.4312820
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,989.00 ft

Wellbore	ОН				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	2/12/2014	10.79	65.79	51,982

Design	OH					
Audit Notes:						
Version:	1.0	Phase:	ACTUAL	Tie On Depth:		0.00
Vertical Section:		Depth From (TVD)	+N/-S	+E/-W	Direction	
		(ft)	(ft)	(ft)	(°)	
		0.00	0.00	0.00	355.15	

Survey Program	Date 5/28/2014		
From (ft)	To (ft) Survey (Wellbore)	Tool Name	Description
9.00 2,484.00	2,363.00 Survey #1 SDI MWD SURFACE (OH) 8,970.00 Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD SDI MWD	SDI MWD - Standard ver 1.0.1 SDI MWD - Standard ver 1.0.1

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00
147.00	0.44	354.79	147.00	0.53	-0.05	0.53	0.32	0.32	0.00
FIRST SDI	MWD SURFACE	SURVEY							
241.00	0.62	309.97	240.99	1.21	-0.47	1.25	0.46	0.19	-47.68
334.00	1.76	324.56	333.97	2.70	-1.68	2.83	1.26	1.23	15.69
428.00	3.61	318.76	427.87	6.10	-4.47	6.46	1.99	1.97	-6.17
522.00	4.13	317.00	521.65	10.80	-8.73	11.50	0.57	0.55	-1.87
616.00	3.78	336.95	615.43	16.13	-12.25	17.11	1.50	-0.37	21.22
708.00	2.99	5.78	707.28	21.31	-13.20	22.35	2.01	-0.86	31.34



Scientific Drilling

Survey Report



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 922-34L PAD

 Well:
 NBU 922-34L1CS

Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference: GL 4989 & KB 18 @ 5007.00ft (SST 57)

MD Reference: GL 4989 & KB 18 @ 5007.00ft (SST 57)

Well NBU 922-34L1CS

North Reference: Tru

Survey Calculation Method: Minimum Curvature

Database: Denver Sales Office

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
803.00	1.14	28.63	802.21	24.60	-12.50	25.57	2.09	-1.95	24.05
898.00	1.23	41.46	897.19	26.20	-11.37	27.06	0.29	0.09	13.51
992.00		14.65	991.17	28.21	-10.37	28.98	0.78	0.37	-28.52
1,084.00	2.11	6.22	1,083.12	31.12	-9.87	31.84	0.65	0.58	-9.16
1,176.00	1.98	7.62	1,175.06	34.38	-9.47	35.05	0.15	-0.14	1.52
1,271.00	1.32	353.56	1,270.02	37.09	-9.38	37.75	0.81	-0.69	-14.80
1,365.00	1.46	9.78	1,363.99	39.35	-9.30	39.99	0.44	0.15	17.26
1,460.00	1.32	2.96	1,458.96	41.63	-9.04	42.25	0.23	-0.15	-7.18
1,553.00	1.32	346.18	1,551.94	43.74	-9.24	44.37	0.41	0.00	-18.04
1,647.00		22.33	1,645.90	46.42	-8.83	47.00	1.42	0.88	38.46
1,743.00		13.99	1,741.83	49.76	-7.72	50.24	0.33	-0.09	-8.69
1,836.00	1.23	359.00	1,834.80	52.38	-7.34	52.82	1.00	-0.89	-16.12
1,929.00		337.14	1,927.78	54.23	-7.71	54.69	0.49	-0.10	-23.51
2,022.00	0.91	31.70	2,020.76	55.72	-7.69	56.17	1.03	-0.25	58.67
2,116.00		23.53	2,114.75	57.08	-6.98	57.47	0.16	0.06	-8.69
2,211.00	1.15	23.10	2,209.73	58.69	-6.28	59.02	0.19	0.19	-0.45
2,303.00	1.85	10.08	2,301.70	61.01	-5.66	61.27	0.84	0.76	-14.15
2,363.00	1.58	11.67	2,361.68	62.77	-5.32	62.99	0.46	-0.45	2.65
LAST SDI	MWD SURFACE S	URVEY							
2,388.00	1.53	13.75	2,386.67	63.43	-5.17	63.64	0.30	-0.19	8.32
8 5/8" 2,484.00	1.37	23.00	2,482.64	65.73	-4.42	65.87	0.30	-0.17	9.64
	MWD PRODUCTION		2,402.04	05.75	-4.42	05.67	0.30	-0.17	9.04
2,579.00		162.94	2,577.63	66.51	-3.89	66.60	1.73	-1.08	147.31
2,674.00	0.63	216.93	2,672.62	65.82	-4.12	65.94	0.54	0.31	56.83
2,769.00		216.39	2,767.62	64.85	-4.85	65.02	0.22	0.22	-0.57
2,864.00		213.35	2,862.61	63.69	-5.66	63.94	0.05	0.02	-3.20
2,959.00		188.21	2,957.59	62.31	-6.16	62.60	0.43	0.11	-26.46
3,053.00		192.52	3,051.58	60.68	-6.46	61.01	0.13	0.11	4.59
3,148.00	1.32	174.85	3,146.56	58.73	-6.55	59.07	0.47	0.27	-18.60
3,243.00		191.46	3,241.53	56.43	-6.70	56.79	0.46	0.18	17.48
3,338.00		131.73	3,336.52	54.84	-6.53	55.20	1.36	-0.85	-62.87
3,433.00		161.84	3,431.51	53.70	-5.85	54.01	0.54	0.31	31.69
3,528.00		171.60	3,526.48	51.72	-5.42	51.99	0.59	0.55	10.27
3,623.00	1.50	167.27	3,621.45	49.28	-4.97	49.53	0.12	0.01	-4.56
3,718.00		162.99	3,716.42	46.75	-4.29	46.94	0.22	0.18	-4.51
3,813.00		160.57	3,811.37	43.86	-3.33	43.99	0.36	0.35	-2.55
3,908.00		154.64	3,906.34	41.71	-2.50	41.77	1.28	-1.27	-6.24
4,003.00		195.42	4,001.32	39.99	-2.53	40.06	1.01	0.65	42.93
4,098.00	1.32	152.88	4,096.30	37.89	-2.34	37.95	1.05	-0.09	-44.78
4,193.00		140.66	4,191.26	35.79	-0.93	35.74	0.57	0.45	-12.86
4,288.00		142.24	4,191.20	33.63	0.80	33.45	0.19	-0.18	1.66
4,383.00		221.26	4,381.21	32.54	1.55	32.29	1.65	-1.57	83.18
4,478.00		350.19	4,476.21	33.28	1.36	33.04	1.03	0.93	135.72



Scientific Drilling

Survey Report



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 922-34L PAD

 Well:
 NBU 922-34L1CS

Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference: GL 4989 & KB 18 @ 5007.00ft (SST 57)

MD Reference: GL 4989 & KB 18 @ 5007.00ft (SST 57)

North Reference: True

Survey Calculation Method: Minimum Curvature

Database: Denver Sales Office

Well NBU 922-34L1CS

у									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,573.00	0.70	332.70	4,571.20	34.59	0.96	34.38	0.39	-0.28	-18.41
4,668.00	1.49	22.45	4,666.18	36.24	1.16	36.02	1.23	0.83	52.37
4,763.00	1.67	27.81	4,761.14	38.61	2.28	38.28	0.24	0.19	5.64
4,858.00	1.67	3.47	4,856.10	41.22	3.01	40.81	0.74	0.00	-25.62
4,953.00	1.32	7.68	4,951.07	43.68	3.24	43.25	0.39	-0.37	4.43
5,047.00	1.18	12.08	5,045.05	45.70	3.59	45.23	0.18	-0.15	4.68
5,142.00	0.74	16.13	5,140.04	47.25	3.96	46.74	0.47	-0.46	4.26
5,237.00	0.62	1.97	5,235.03	48.35	4.15	47.83	0.22	-0.13	-14.91
5,332.00	0.44	31.26	5,330.02	49.18	4.36	48.63	0.34	-0.19	30.83
5,427.00	0.38	83.35	5,425.02	49.52	4.86	48.94	0.38	-0.06	54.83
5,522.00	0.41	123.74	5,520.02	49.37	5.46	48.73	0.29	0.03	42.52
5,617.00	0.53	141.80	5,615.02	48.84	6.01	48.15	0.20	0.13	19.01
5,712.00	0.77	147.71	5,710.01	47.95	6.62	47.22	0.26	0.25	6.22
5,806.00	0.32	178.08	5,804.01	47.16	6.97	46.40	0.55	-0.48	32.31
5,902.00	0.55	173.19	5,900.00	46.43	7.03	45.67	0.24	0.24	-5.09
5,997.00	0.73	312.80	5,995.00	46.39	6.64	45.66	1.27	0.19	146.96
6,092.00	0.50	326.88	6,090.00	47.15	5.97	46.47	0.29	-0.24	14.82
6,186.00	0.27	280.87	6,183.99	47.53	5.53	46.90	0.39	-0.24	-48.95
6,281.00	0.57	225.09	6,278.99	47.24	4.98	46.65	0.50	0.32	-58.72
6,376.00	0.74	188.46	6,373.99	46.30	4.55	45.75	0.47	0.18	-38.56
6,471.00	1.06	183.38	6,468.97	44.82	4.41	44.28	0.35	0.34	-5.35
6,566.00	1.32	175.73	6,563.95	42.85	4.44	42.32	0.32	0.27	-8.05
6,662.00	1.49	174.41	6,659.92	40.50	4.64	39.97	0.18	0.18	-1.38
6,756.00	0.62	202.19	6,753.91	38.82	4.57	38.29	1.05	-0.93	29.55
6,851.00	1.06	291.22	6,848.90	38.66	3.56	38.22	1.28	0.46	93.72
6,946.00	1.14	330.07	6,943.88	39.80	2.27	39.46	0.77	0.08	40.89
7,041.00	1.14	350.28	7,038.87	41.55	1.64	41.26	0.42	0.00	21.27
7,136.00	0.79	23.24	7,133.85	43.08	1.73	42.78	0.68	-0.37	34.69
7,231.00	0.51	73.03	7,228.85	43.80	2.40	43.45	0.64	-0.29	52.41
7,326.00	0.53	86.96	7,323.84	43.95	3.24	43.52	0.13	0.02	14.66
7,421.00	0.65	106.01	7,418.84	43.83	4.20	43.31	0.24	0.13	20.05
7,516.00	0.58	323.49	7,513.84	44.06	4.43	43.53	1.23	-0.07	-150.02
7,611.00	0.17	280.20	7,608.83	44.47	4.00	43.98	0.50	-0.43	-45.57
7,706.00	0.35	253.69	7,703.83	44.42	3.59	43.96	0.22	0.19	-27.91
7,800.00	0.62	187.24	7,797.83	43.83	3.25	43.40	0.61	0.29	-70.69
7,895.00	0.53	192.34	7,892.83	42.89	3.09	42.48	0.11	-0.09	5.37
7,991.00	0.44	179.51	7,988.82	42.09	3.00	41.69	0.15	-0.09	-13.36
8,086.00	0.60	173.15	8,083.82	41.23	3.06	40.83	0.18	0.17	-6.69
8,181.00	0.85	184.44	8,178.81	40.04	3.06	39.63	0.30	0.26	11.88
8,276.00	0.70	182.76	8,273.80	38.75	2.98	38.36	0.16	-0.16	-1.77
8,372.00	1.06	159.82	8,369.79	37.34	3.26	36.93	0.52	0.38	-23.90
8,466.00	1.91	156.78	8,463.76	35.08	4.18	34.60	0.91	0.90	-3.23
8,562.00	1.76	144.62	8,559.71	32.41	5.66	31.81	0.43	-0.16	-12.67



Scientific Drilling

Survey Report



US ROCKIES REGION PLANNING Company:

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 922-34L PAD Well: NBU 922-34L1CS

Wellbore: ОН Design: ОН

Local Co-ordinate Reference:

Well NBU 922-34L1CS GL 4989 & KB 18 @ 5007.00ft (SST 57) TVD Reference:

MD Reference: GL 4989 & KB 18 @ 5007.00ft (SST 57)

North Reference:

Minimum Curvature **Survey Calculation Method:** Denver Sales Office Database:

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,657.00	1.76	143.04	8,654.66	30.05	7.38	29.32	0.05	0.00	-1.66
8,751.00	1.58	129.94	8,748.63	28.07	9.25	27.19	0.45	-0.19	-13.94
8,847.00	2.37	136.53	8,844.57	25.78	11.63	24.70	0.85	0.82	6.86
8,915.00	2.43	136.58	8,912.51	23.71	13.58	22.48	0.09	0.09	0.07
LAST SDI M	WD PRODUCTIO	N SURVEY							
8,970.00	2.43	136.58	8,967.46	22.02	15.19	20.65	0.00	0.00	0.00
SDI PROJEC	TION TO TD								

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-34L1CS - actual wellpath mis - Circle (radius 25.00	ses target cen	0.00 ter by 15.32	8,969.00 ft at 8970.00	36.06 ft MD (8967.4	9.25 6 TVD, 22.02	14,526,664.25 N, 15.19 E)	2,079,825.21	39.9910840	-109.4312490

Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth	Depth		Diameter	Diameter	
	(ft)	(ft)	Name	(in)	(in)	
	2,388.00	2,386.67 8 5/8"		8.625	11.000	

Design Annotations				
Measured	Vertical	Local Coo	rdinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
147.0	00 147.00	0.53	-0.05	FIRST SDI MWD SURFACE SURVEY
2,363.0	00 2,361.68	62.77	-5.32	LAST SDI MWD SURFACE SURVEY
2,484.0	00 2,482.64	65.73	-4.42	FIRST SDI MWD PRODUCTION SURVEY
8,915.0	00 8,912.51	23.71	13.58	LAST SDI MWD PRODUCTION SURVEY
8,970.0	00 8,967.46	22.02	15.19	SDI PROJECTION TO TD

Checked By:	Approved By:	Date:

5/28/2014 11:44:43AM COMPASS 5000.1 Build 70 Page 5

				U	S ROCI	KIES RI	EGION	
							ary Report	
	NTAH	ove Mean S	Site: NBU Start date	: 7/9/201	4)/S/22/E/3	Spud date: 2/24	Rig name no.: End date: 1/20/2015
Level) Date	Time	Duration	Phase	Code	Sub	P/U	MD from	Operation
7/7/2014	Start-End	(hr)			Code		(usft)	.,
7/9/2014	9:00 - 10:30	1.50	SUBSPR	52	В	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & SURFACE 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -41 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 559 PSI HELD FOR 5 MIN LOST -44 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING
12/23/2014	9:00 - 10:00	1.00	SUBSPR	52	В	Р		FILLED SURFACE WITH 10 BBLS H2O FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -55 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.
	10:00 - 11:00	1.00	SUBSPR	37	D	Р		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
12/29/2014	6:30 - 6:45	0.25	FRAC	48		Р		HSM-JSA
	6:45 - 17:30	10.75	FRAC	36	Н	P		FRAC STG #1) WHP 1403 PSI, BRK 3462 PSI @ 4.2 BPM. ISIP 2486 PSI, FG. 0.72 ISIP 2732 PSI, FG. 0.75, NPI 246 PSI, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 1279 PSI, BRK 2497 PSI @ 8.4 BPM. ISIP 1704 PSI, FG. 0.63 ISIP 2915 PSI, FG. 0.78, NPI 1211 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, X/O TO FRAC. FRAC STG #3) WHP 583 PSI, BRK 2473 PSI @ 5 BPM. ISIP 1971 PSI, FG. 0.67 ISIP 2731 PSI, FG. 0.77, NPI 760 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 459 PSI, BRK 3125 PSI @ 4.9 BPM. ISIP 1683 PSI, FG. 0.65 ISIP 2381 PSI, FG. 0.73, NPI 698 PSI, SWI, SDFN.
12/30/2014	6:30 - 6:45	0.25	FRAC	48		Р		HSM-JSA

2/13/2015 1:41:50PM 1

				U	S ROC	KIES RI	EGION	
				Opera	ation S	Summa	ry Report	
Vell: NBU 922-3	34L1CS YELLOW						Spud date: 2/2	24/2014
Project: UTAH-U	IINTAH		Site: NBU	J 922-34L	PAD			Rig name no.:
Event: COMPLE	TION		Start date	e: 7/9/201	4			End date: 1/20/2015
ctive datum: RI	KB @5,007.00usft (al	oove Mean Se	ea	UWI: N	W/SW/0/9	9/S/22/E/3	4/0/0/26/PM/S/2	071/W/0/1012/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:45 - 17:30	10.75	FRAC	36	Н	Р		SET CBP & PERF STG #5 AS DESIGNED, X/O TO FRAC. FRAC STG #5) WHP 249 PSI, BRK 3662 PSI @ 2.9
								BPM. ISIP 1789 PSI, FG. 0.67 ISIP 2165 PSI, FG. 0.72 NPI 376 PSI, X/O TO WL.
								SET CBP & PERF STG #6 AS DESIGNED, X/O TO FRAC.
								FRAC STG #6) WHP 1721 PSI, BRK 2798 PSI @ 4.4 BPM. ISIP 2141 PSI, FG. 0.73 ISIP 2379 PSI, FG. 0.76 NPI 238 PSI, X/O TO WL.
								SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC.
								FRAC STG #7) WHP 813 PSI, BRK 2344 PSI @ 4.9 BPM. ISIP 873 PSI, FG. 0.56 ISIP 2127 PSI, FG. 0.73, NPI 1254 PSI, X/O TO WL.
								SET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC.
								FRAC STG #8) WHP 1824 PSI, BRK 2161 PSI @ 6.5 BPM. ISIP 1887 PSI, FG. 0.71 ISIP 2154 PSI, FG. 0.75 NPI 267 PSI, X/O TO WL.
								SET KILL PLUG.
								RDMO FRAC & WL EQUIP.
								TOTAL FLUID= 10637 BBLS
1/19/2015	7:00 - 7:15	0.25	DRLOUT	48		Р		TOTAL SAND= 224596 LBS HSM, P/U PIPE W/ PIPE WRANGLER
11 10/2010	7:15 - 10:00	2.75	DRLOUT	30	Α	P		MIRU, N/D WELL HEAD, N/U BOPS, R/U TBG EQUIP,
	10:00 - 10:00	0.00	DRLOUT	31	1	Р		MIRU SLAUGH PIPE WRANGLER. P/U 3-7/8 BIT W/ POBS PKG, TALLEY AND P/U
	. 5.55			•				

2/13/2015 1:41:50PM 2

Р

HSM, DRILLING PLUGS

1/20/2015

7:00 - 7:15

0.25

DRLOUT

48

BOPS TO 3,000# [NO LEAKS] BREAK CIRC WL RI PUMP, DRILL OUT HALIBURTON PLUG @=6,832 MIN W/ 200# PRESSURE INCREASE. PLUG #2] CONT. TO RIH TAG @=7,013' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,043' IN 6 MIN W/ 250# PRESSURE INCREASE PLUG #3] CONT. TO RIH TAG @=7,245' [35' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,280' IN 4 MIN W/ 350# PRESSURE INCREASE PLUG #4] CONT. TO RIH TAG @=7,451' [20' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,471' IN 5 MIN W/ 550# PRESSURE INCREASE PLUG #5] CONT. TO RIH TAG @=7,705' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,735' IN 7 MIN W/ 500# PRESSURE INCREASE PLUG #6] CONT. TO RIH TAG @=7,977' [95' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,072' IN 7 MIN W/ 550# PRESSURE INCREASE PLUG #7] CONT. TO RIH TAG @=7,271' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,072' IN 7 MIN W/ 550# PRESSURE INCREASE		US ROCKI	REGION
Site: NBU 922-34 L PAD		Operation Su	nary Report
Start date: 7/9/2014 End date: 1/20/2015	ell: NBU 922-34L1CS YELLOW		Spud date: 2/24/2014
UWI: NW/SW/0/9S/22/E/34/0/0/26/PW/S/2071/W/0/1012/0/0 Date Time	oject: UTAH-UINTAH	Site: NBU 922-34L PAD	Rig name no.:
Date Time Duration Phase Code Sub P/U MD from Operation	vent: COMPLETION	Start date: 7/9/2014	End date: 1/20/2015
Start-End		UWI: NW/SW/0/9/S	E/34/0/0/26/PM/S/2071/W/0/1012/0/0
7:15 - 17:00 9.75 DRLOUT 44 C P SICP=0#, SITP=0#, OPEN WELL PRESSURE TES BOPS TO 3.000# [NO LEAKS] BREAK CIRC WL RI PUMP, DRILL OUT HALIBURTON PLUG @=6.832 MIN W; 200# PRESSURE INCREASE. PLUG #2] CONT. TO RIH TAG @=7.013' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7.043' IN 6 MIN W; 250# PRESSURE INCREASE PLUG #3] CONT. TO RIH TAG @=7.245' [35' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7.280' IN 4 MIN W; 350# PRESSURE INCREASE PLUG #4] CONT. TO RIH TAG @=7.451' [20' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7.471' IN 5 MIN W; 550# PRESSURE INCREASE PLUG #5] CONT. TO RIH TAG @=7.705' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7.735' IN 7 MIN W; 550# PRESSURE INCREASE PLUG #6] CONT. TO RIH TAG @=7.977' [95' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8.072' IN 7 MIN W; 550# PRESSURE INCREASE PLUG #7] CONT. TO RIH TAG @=7.271' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8.072' IN 7 MIN W; 550# PRESSURE INCREASE			
C/O AND DRILL THROUGH HALIBURTON PLUG @=8,611' IN 4 MIN W/ 800# PRESSURE INCREAS CONT. TO RIH C/O TO PBTD @=8,918' CIRC WEL R/D POWER SWIVEL, L/D 18 JNTS P/U STRIP	()		SICP=0#, SITP=0#, OPEN WELL PRESSURE TEST BOPS TO 3,000# [NO LEAKS] BREAK CIRC WL RIG PUMP, DRILL OUT HALIBURTON PLUG @=6,832 IN MIN W/ 200# PRESSURE INCREASE. PLUG #2] CONT. TO RIH TAG @=7,013' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,043' IN 6 MIN W/ 250# PRESSURE INCREASE. PLUG #3] CONT. TO RIH TAG @=7,245' [35' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,280' IN 4 MIN W/ 350# PRESSURE INCREASE. PLUG #4] CONT. TO RIH TAG @=7,451' [20' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,471' IN 5 MIN W/ 550# PRESSURE INCREASE. PLUG #5] CONT. TO RIH TAG @=7,705' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=7,735' IN 7 MIN W/ 500# PRESSURE INCREASE. PLUG #6] CONT. TO RIH TAG @=7,977' [95' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,072' IN 7 MIN W/ 550# PRESSURE INCREASE. PLUG #7] CONT. TO RIH TAG @=7,271' [30' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,301' IN 6 MIN W/ 700# PRESSURE INCREASE. PLUG #8] CONT. TO RIH TAG @=8,566' [45' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,301' IN 6 MIN W/ 700# PRESSURE INCREASE. PLUG #8] CONT. TO RIH TAG @=8,566' [45' FILL] C/O AND DRILL THROUGH HALIBURTON PLUG @=8,611' IN 4 MIN W/ 800# PRESSURE INCREASE. CONT. TO RIH C/O TO PBTD @=8,918' CIRC WELL, R/D POWER SWIVEL, L/D 18 JNTS P/U STRIP HANGER IN WELL, LAND W/ 263 JNTS 2-3/8 L-80 TBG @=8,365.47', R/D TBG EQUIP, R/D PIPE

2/13/2015 1:41:50PM 3

EOT @=

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8,365.47

US ROCKIES REGION

General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-34L1CS YELLOW	Wellbore No.	00
Well Name	NBU 922-34L1CS	Wellbore Name	NBU 922-34L1CS
Report no.	_	Report date	12/23/2014
Project	UTAH-UINTAH	Site	NBU 922-34L PAD
Rig Name/No.		Event	COMPLETION
Start date	7/9/2014	End date	1/20/2015
Spud date	2/24/2014	Active datum	RKB @5,007.00usft (above Mean Sea Level)
UWI	NW/SW/0/9/S/22/E/34/0/0/26/PM/S/2071/W/0/1012/0/0		

1.3 General

Contractor	•	Job method	Supervisor	
Perforated Assembly	1	Conveyed method		

Summary

1.5

1.4 Initial Conditions

Fluid type		Fluid density	Gross Interval	6,886.0 (usft)-8,868.0 (usft Start Date/Time	Start Date/Time	12/29/2014 12:00AM
Surface press.		Estimate res press	No. of intervals	99	56 End Date/Time	12/29/2014 12:00AM
TVD fluid top		Fluid head	Total shots	189	189 Net perforation interval	63.00 (usft)
Hydrostatic press.		Press. difference	Avg. shot density	3.00 (shot/ft)	3.00 (shot/ft) Final surface pressure	
Balance Cond	NEUTRAL				Final press, date	

! Intervals

2.1 Perforated Interval

Misrun How Guns Conveyed	
Misrun	
Reason	19.00 PRODUCTION
Charge weight (gram)	19.0
Charge desc. /Charge manufacturer	
Phasing (°)	3.125 120.00
Carr size (in)	3.125
Carr type /Stage No	EXP/
Diameter (in)	0.410 EXP/
Misfires/ Add. Shot	
MD Shot Nbase density (usft) (shot/ft)	3.00
MD base (usft)	6,886.0 6,887.0
MD top (usft)	6,886.(
CCL@ CCL-TS (usft)	
Formation/ Reservoir	M E S A VERDE/
Date	12/29/201 M 4 VE 12:00AM

US ROCKIES REGION

Perforated Interval (Continued)

Date	Formation/ Reservoir	(JJsn)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot N density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr Size	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (qram)	Reason	Misrun How Guns Conveyed
12/29/201 4 12:00AM	M E S A VERDE/			0	0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			6,953.0	6,954.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			0.996.8	6,998.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			7,011.0 7,013.0	7,013.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			7,078.0	7,079.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,110.0	7,111.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,126.0 7,127.0	7,127.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			7,144.0 7,145.0	7,145.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,177.0	7,178.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			7,204.0 7,205.0	7,205.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,224.0 7,225.0	7,225.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,249.0	7,250.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/29/201 4 12:00AM	M E S A VERDE/			7,347.0	7,348.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			7,360.0 7,361.0	7,361.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
	M E S A VERDE/			7,378.0 7,379.0	7,379.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	

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Perforated Interval (Continued)

Date	Formation/ Reservoir	(nsft)	(nsft)	MD top (usft)			Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No		Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
≥ >	M E S A VERDE/			7,389.0 7	7,390.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,407.0 7	7,408.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,417.0 7,418.0	7,418.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,444.0 7,446.0	7,446.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,501.0 7	7,502.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,512.0 7	7,513.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,554.0 7,555.0	7,555.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,590.0	7,592.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 N 4 V 12:00AM	M E S A VERDE/			7,609.0	7,610.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 N 4 V 12:00AM	M E S A VERDE/			7,712.0 7,714.0	7,714.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,792.0 7,793.0	7,793.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2 >	M E S A VERDE/			7,877.0	7,878.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,892.0 7	7,893.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,915.0 7,916.0	7,916.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
2>	M E S A VERDE/			7,940.0 7,941.0	7,941.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
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Perforated Interval (Continued)

Date	Formation/ Reservoir	(nsft)	CCL-TS (usft)	MD top (usft)	MD base (usft)		Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
12/29/201 4 12:00AM	M E S A VERDE/			7,966.0	0.796,7	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 4 12:00AM	M E S A VERDE/			8,040.0	8,042.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,110.0	8,111.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,126.0 8,127.0	8,127.0	3.00		0.410 EXP/	ΧΡ/	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,156.0	8,157.0	3.00		0.410 EXP	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,177.0	8,178.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,196.0 8,197.0	8,197.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 4 12:00AM	M E S A VERDE/			8,229.0	8,230.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 4 12:00AM	M E S A VERDE/			8,251.0 8	8,252.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,266.0	8,267.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
12/29/201 4 12:00AM	M E S A VERDE/			8,395.0 8,396.0	8,396.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,414.0	8,415.0	3.00		0.410 EXP/	ΧΡ/	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,451.0	8,452.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION		
_	M E S A VERDE/			8,488.0 8,489.0	8,489.0	3.00		0.410 EXP/	XP,	3.125	120.00		19.00	19.00 PRODUCTION		
	M E S A VERDE/			8,510.0	8,511.0	3.00		0.410 EXP	XP,	3.125	120.00		19.00	19.00 PRODUCTION		

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Perforated Interval (Continued)

How Guns Conveyed										
Misrun How Guns										
Reason	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer										
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Carr size (in)	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Diameter Carr type /Stage No (in)	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/
Misfires/ D Add. Shot										
Shot density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD base (usft)	8,546.0 8,547.0	8,565.0 8,566.0	8,580.0 8,581.0	8,637.0 8,638.0	8,658.0 8,659.0	8,680.0 8,681.0	8,705.0 8,706.0	8,793.0 8,794.0	8,846.0 8,847.0	8,866.0 8,868.0
MD top (usft)	8,546.0	8,565.0	8,580.0	8,637.0	8,658.0	8,680.0	8,705.0	8,793.0	8,846.0	8,866.0
(nsft)										
(nsft)										
Formation/ Reservoir	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/
Date	12/29/201 4 12:00AM			12/29/201 4 12:00AM	12/29/201 4 12:00AM					

Plots

February 13, 2015 at 1:42 pm